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**Economic analysis of interpreting services: Final report**

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**Deloitte**
Access **Economics**

# Contents

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# Glossary and definitions

| Acronym | Full name |
|---------|-----------|
| AAT | Administrative Appeals Tribunal |
| ACT | Australian Capital Territory |
| ABS | Australian Bureau of Statistics |
| AIHW | Australian Institute of Health and Welfare |
| CALD | Culturally and Linguistically Diverse |
| ED | Emergency Department |
| FCFCOA | Federal Circuit and Family Court of Australia |
| FECCA | Federation of Ethnic Communities Councils of Australia |
| GP | General Practice |
| HILDA | Household, Income and Labour Dynamics in Australia |
| HSP | Humanitarian Settlement Program |
| LOS | Length of stay |
| LSP | Language Service Provider |
| QOL | Quality of life |

| Term | Definition |
|------|------------|
| Low quality interpreting | Interactions where an interpreter is provided but the service is of low quality, resulting in worse outcomes |
| Unfilled demand | Interactions where an interpreter has been requested, but was not filled by LSPs due to interpreter unavailability |
| Latent demand | Interactions where an interpreter has not been requested, either by the service provider or the individual. This could result in interpreting being undertaken on an ad hoc basis by friends and relatives, or not used at all. |
| Unmet demand | Instances of unfilled demand and latent demand. Interactions where an interpreter was not used. |
| Sub-optimal interpreting | Lower bound: instances of low quality interpreting and unfilled demand. Upper bound: instances of low quality interpreting, unfilled demand and latent demand. |
| Informal interpreters | This refers to friends, family members or other people from the same linguistic community who are not professional or certified interpreters. |
| Low English proficiency | Individuals with either no English proficiency or limited English proficiency, who are born overseas. |
| Tier A languages | Tier A languages defined based on Judicial Council on Cultural Diversity and Inclusion recommended national standards for working with interpreters in courts and tribunals. Tier A captures 10 spoken languages with relatively more NAATI certified interpreters. This includes Arabic, Cantonese, Greek, Italian, Japanese, Mandarin, Persian, Spanish, Turkish and Vietnamese. |
| Certified interpreters | For the purposes of this study, this includes Specialist Interpreter certifications, Certified Interpreter credentials, Certified Provisional Interpreter credentials, and Recognised Practicing Interpreter status. |
| Non-certified interpreters | For the purpose of this study, this includes individuals who do not hold any NAATI certification or hold legacy NAATI credentials. |

# Executive summary

## Project context, objectives and approach

Australia is one of the most culturally and linguistically diverse (CALD) countries in the world, with one in four Australians born overseas. As of 2021, there are almost 740,000 people born overseas with 'low English proficiency' living in Australia.[1]

Interpreters play an important role in facilitating participation and equitable access to essential services such as government services, medical aid and legal advice for people with low English proficiency. Notwithstanding, various Australian and state government reports examining multicultural access and equity issues have noted concerns in relation to interpreter access and quality, while the sector itself views current working conditions as problematic.

Within this context, the Department of Home Affairs engaged Deloitte Access Economics to undertake targeted economic analysis into:

- the economic and social costs associated with existing provision of language services (with a focus on Australian government services)
- how demand for and supply of language services may change in the future (in the absence of significant changes to address issues)
- the potential costs and risks, into the future, to government of failing to address current market failure issues.

Interpreting services are procured by a range of government departments to support access to an array of services – ranging from education, employment and housing, through to health and legal matters. This report focuses on *spoken interpreting services* for the government delivery of select services (Figure i). The case studies focus on services either led by the Australian Government or where there is likely to be significant risk from sub-optimal interpreting (e.g. public hospitals and health services). Across the case studies, government procurement of interpreting services equalled $374 million from 2018 to 2023.

Figure i: In-scope research areas for this report
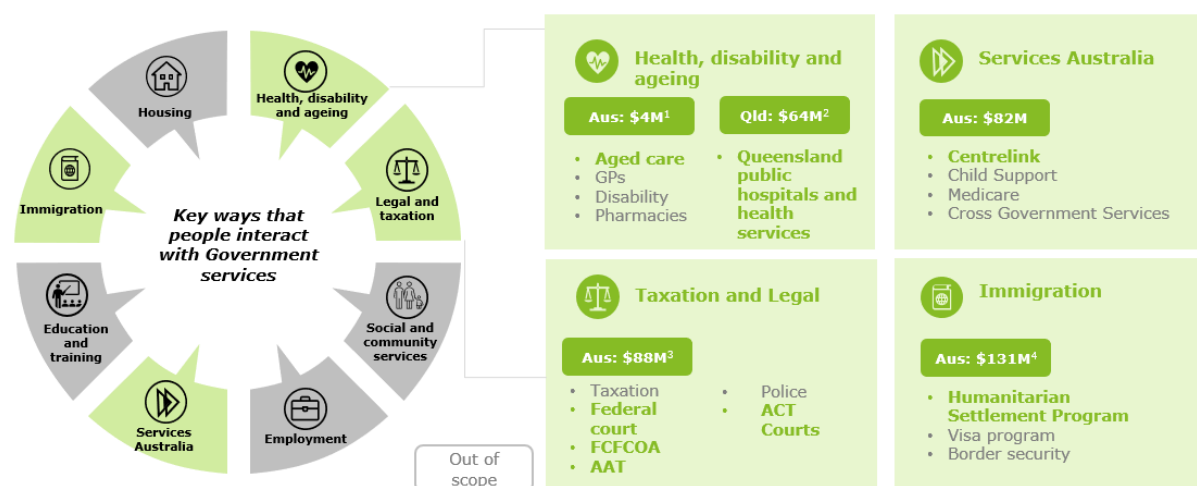


[1]Includes the Department of Health and Aged Care and Aged Care Quality and Safety Commission. [2]Queensland Government annual expenditure on interpreting in public hospitals and health services is multiplied by five to support comparison with Australian Government procurement figures. [3]Includes AAT, ATO and Federal Police. [4]Includes Department of Home Affairs.

Source: Deloitte Access Economics (2023). Note: The $ figures represent the estimated government procurement of interpreting services (2018-2023) for the relevant agencies in each area of focus.

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[1] In this report, 'low English proficiency' is defined as either having no English proficiency or limited English proficiency.

The research is exploratory in nature. Given the breadth of sectors considered and a lack of centralised data collection on interpreting use and quality and outcomes, a range of data sources of varying quality have been utilised:

- **Literature scan and publicly available data (Evidence quality: relatively high)**: while Australian studies are prioritised, this is supplemented by international studies.
- **Sector survey (Evidence quality: medium)**: analysis of the Department of Home Affairs Language Sector Sustainability Survey, which captured over 2,200 responses from interpreters and translators. Of these, 1,700 responses were from interpreters.
- **Data from Language Service Providers** (LSPs) and **government departments (Evidence quality: medium)**: aggregated administrative data from seven LSPs and two government departments on the use of interpreters, representing 1.5 million occasions of interpreting in 2022.
- **Consultations (Evidence quality: anecdotal)**: interviews with 21 peak bodies, academics, service providers, and Department representatives.

## Outcomes from sub-optimal interpreting

There is strong and consistent evidence that being unable to access interpreters or working with low-quality interpreters ('sub-optimal interpreting') can result in a range of negative outcomes for individuals, government and broader society. The direct resultant outcomes across the service delivery areas are given in Figure ii. The downstream effects of sub-optimal interpreting have not been considered in this study.

Based on the available evidence, Deloitte Access Economics quantifies the per unit economic and social costs associated with each instance of sub-optimal interpreting across different delivery settings (Table ii).

The estimated per unit costs are highest for aged care and public hospitals and health services due to the high costs of service delivery, and significant outcomes for individuals, governments and society associated with sub-optimal interpreting.

The unit costs are not directly comparable across service delivery settings as they have different units. For instance, whereas a Services Australia assignment lasts for 20 minutes, the costs for aged care are calculated on the assumption that a person is in residential aged care for a year. Further details on the key assumptions and data sources underpinning the estimates are given in Appendix E.

Table ii: Economic and social cost per unit of low-quality interpreting and not accessing interpreting services, by service delivery case studies

| | Evidence quality (relative) | Per unit [†] | Low-quality interpreting | Unmet demand for interpreting |
|---|---|---|---|---|
| Aged care | Medium | Per person in residential aged care | $4,150 | $8,000 |
| Legal | High | Per hearing | AAT: $1,430[^]<br>FCFCOA: $1,100 | AAT: $1,330[^]<br>FCFCOA: $1,330 |
| HSP | Medium | Per migrant | $1,630 | $3,600 |
| Public hospitals and health Services (Qld) | High | Per hospital admission* | $3,620 | $5,010 |
| Services Australia | Low | Per interpreter assignment (~20min) | $25 | $39 |

Source: Deloitte Access Economics (2023). There was insufficient evidence to quantify costs for Courts (ACT). *Note that in addition to hospital admissions, Emergency Department presentations and non-admitted service events are also used for select cost categories. See Table 4.3 for further details. ^For AAT, the per unit costs of low-quality interpreting are higher compared to unmet demand as there are additional costs associated with appeals, remitted cases and adjournments. †Units are not directly comparable across service delivery areas.

## Extent of current sub-optimal interpreting

Deloitte Access Economics estimates the prevalence of sub-optimal interpreting drawing on LSP data, supplemented by the literature and consultations. Potential total demand can be disaggregated to identify:

- **Low-quality** interactions where an interpreter is provided but is of low-quality, resulting in worse outcomes. As quality cannot be directly observed, it has been proxied by the employment of non-certified interpreters[2] and interpreting delivered via telephone.[3]
- **Unmet demand for interpreting** where an interpreter is not used. This includes **unfilled demand** – interactions where an interpreter has been requested, but was not filled – and **latent demand** – interactions where an interpreter has not been requested).

Drawing on the best available evidence from the consultations, data and literature, the distribution of total potential demand by service delivery areas is estimated (Chart i). Low quality interpreting is most prevalent in legal settings due to the highly complex and technical nature of the interpreting required. In contrast, latent demand is highest for aged care and health with services reporting not using formal interpreters consistently due to (1) high levels of staff turnover and low familiarity with the guidelines and/or (2) defaulting to reliance on family, friends and bilingual staff for interpreting due to their immediate availability.[4] Further details on the approach and assumptions are given in Chapter 3.

Chart i: Estimated distribution of total potential demand by service delivery areas
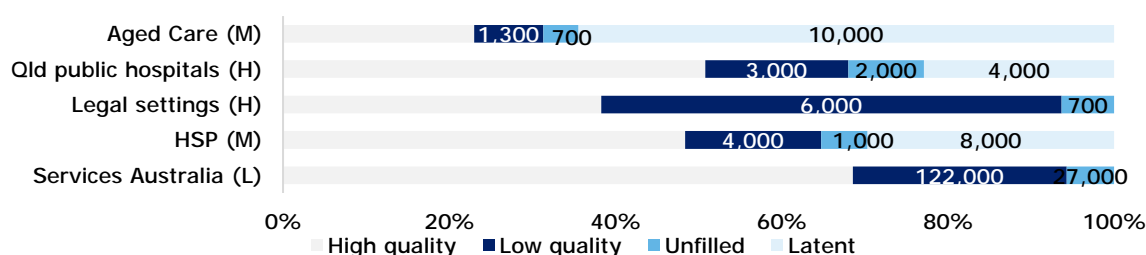


Source: Deloitte Access Economics (2023). H = relatively high degree of confidence in estimates; M = medium; L= low. The numbers represent the instance of interpreting, with the units given in Table ii.*Latent demand has not been estimated for Services Australia due to lack of data.

## The economic and social costs of current sub-optimal interpreting

The per unit cost of sub-optimal service delivery (Table ii) are combined with instances of sub-optimal interpreter access (Chart i) to estimate the economic and social costs of current sub-optimal interpreting.

Drawing on select case studies with relatively stronger evidence, Deloitte Access Economics estimates that **as a lower bound, the current provision of sub-optimal interpreting costs the Australian economy and society $326 million per annum.** This captures costs across the Australian Government case studies (aged care, legal, HSP, Services Australia) and their respective agencies, and public hospitals and health services across Australia (see extrapolated total in Table iii).

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[2] For the purposes of this study, certified interpreters includes those with Specialist Interpreter certifications, Certified Interpreter credentials, Certified Provisional Interpreter credentials, and Recognised Practicing Interpreter status.
[3] There is strong evidence in the literature that telephone interpreting leads to higher rates of interpreting errors and lower satisfaction relative to face-to-face or video conferencing interpreting.
[4] Informal or ad hoc interpreting is associated with lower quality of interpretation and potential ethical implications (e.g., breach of privacy).

Further, the evidence suggests that interpreting is frequently not requested. **When including latent demand, the upper bound economic and social cost across the extrapolated range of service delivery areas increases to $892 million per annum, with over half of costs relating to public hospitals and health services.**

Table iii: Estimated economic and social cost of current sub-optimal interpreting ($ million), 2023

| Service delivery | (1) Low-quality | (2) Unfilled | (1) + (2) Lower bound | (3) Latent | (1) + (2) + (3) Upper bound |
|---|---|---|---|---|---|
| **Australian Government led case studies** | | | | | |
| Aged Care (M) | 5.5 | 5.4 | 10.8 | 82.7 | 93.5 |
| Legal settings (M) | 7.6 | 0.9 | 8.5 | - | 8.5 |
| HSP (M) | 7.0 | 5.3 | 12.3 | 28.2 | 40.6 |
| Services Australia (L) | 3.0 | 1.1 | 4.1 | - | 4.1 |
| **Aus Gov case studies** | **23** | **13** | **36** | **111** | **147** |
| **State Government led case studies** | | | | | |
| Public hospital and health services (Qld) (H) | 16.3 | 8.0 | 24.4 | 20.2 | 44.5 |
| **Extrapolation to select other service delivery areas** | | | | | |
| Uncaptured relevant Aus Gov Agencies* | 21.1 | 19.4 | 40.4 | 248.7 | 289.1 |
| Public hospital and health services (ROA) | 151.1 | 74.2 | 225.3 | 186.3 | 411.7 |
| **Extrapolated total^** | **212** | **114** | **326** | **566** | **892** |

Source: Deloitte Access Economics (2023). H = relatively high degree of confidence in estimates; M = medium; L= low.

*Relevant Australian Government Agencies refer to those responsible for delivering the case studies: Department of Health and Aged Care, Department of Home Affairs, AAT, FCFCOA and Federal Court, and Services Australia. ^Extrapolated total refers to the case studies + relevant Aus gov agencies + public hospital and health services (ROA).
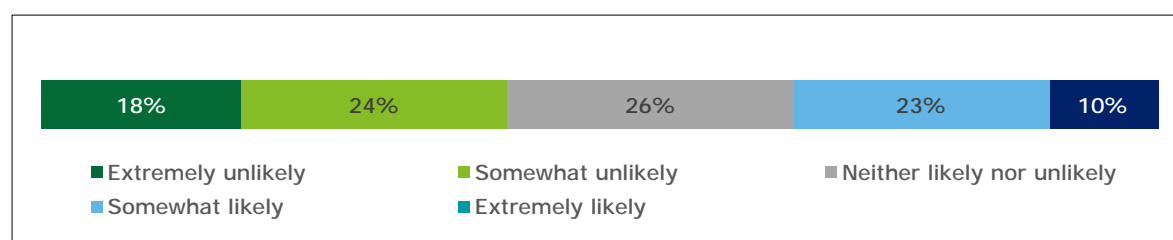
## Future sustainability of the sector

Demand for interpreters – as proxied by the population with low English proficiency – is expected to grow by 1.7% per annum over the next decade. By 2033, there are expected to be over 877,000 individuals with low English proficiency. Growth in demand is expected to be driven in part by higher growth in humanitarian migrants in line with Australian Government aspirations to increase the intake to 20,000 visas per annum (from 17,000 per annum historically).[5]

On the supply side (supply of workers in the interpreting sector), the potential to see growth appears less assured. In particular, the Department of Home Affairs Language Sector Sustainability Survey reveals that 33% of respondent interpreters and translators report being either somewhat likely or extremely likely to leave the sector. This is driven predominantly by a perceived lack of job security, low remuneration, and casualisation of work. However, it is unclear how this would translate to actual exits.

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[5] https://minister.homeaffairs.gov.au/AndrewGiles/Pages/increase-to-humanitarian-program-11082023.aspx

Chart ii: Reported likelihood to leave the sector by interpreters and translators

| 18% | 24% | 26% | 23% | 10% |
|-----|-----|-----|-----|-----|

■ Extremely unlikely     ■ Somewhat unlikely     ■ Neither likely nor unlikely
■ Somewhat likely     ■ Extremely likely

Source: Deloitte Access Economics, based on the Department of Home Affairs Language Sector Sustainability Survey. Note that the shares may not sum to 100% due to rounding.

Assuming the supply of interpreters remains fixed at 2023 levels (given competing influences in and out of the sector), combined with project demand for interpreting services, the extrapolated total economic and social costs of sub-optimal interpreting for the relevant Australian Government agencies and public health services is expected to be between $385 million (lower bound) and $1.1 billion per annum (upper bound) by 2033.

If the overall supply of interpreters decreases as suggested based on stated intentions from the sector survey, and/or there is a growing mismatch in languages provided relative to 2023, the economic and social costs of sub-optimal interpreting could be higher than estimated.

## Implications and next steps

Through estimating economic and social costs for case studies where there is relatively stronger and more complete evidence, this study presents a preliminary economic case for improving access to and quality of interpreting services.

Beyond the economic case, the Australian Government should also be guided by moral and legal considerations in ensuring the sustainability of the interpreter sector. Australia is party to core international human rights treaties recognising the entitlement of all persons to "the enjoyment of the highest attainable standard of physical and mental health" and to "a fair and public hearing".[6,7] Inadequate interpreting puts Australia's ability to achieve these international human rights commitments at risk.

Improving the quality and accessibility of interpreting is expected to reduce the current and expected future economic and social costs associated with market failure. Procurement can play a role in both directly improving the quality of current interpreting provision and supporting other future changes.

Through the collection of better data, more comprehensive research on the economic and social costs of interpreting across the full gamut of all Australian Government services. In turn, this would further strengthen the case for change, while also providing a foundation for evaluating the impacts of any further policy changes.

However, procurement policy should be supported by a range of government policies aimed at addressing broader issues related to low-quality, unfilled demand and latent demand (Table iv).

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[6] United Nations (General Assembly). (1966). International Covenant on Economic, Social, and Cultural Rights. Treaty Series, 999, 171.
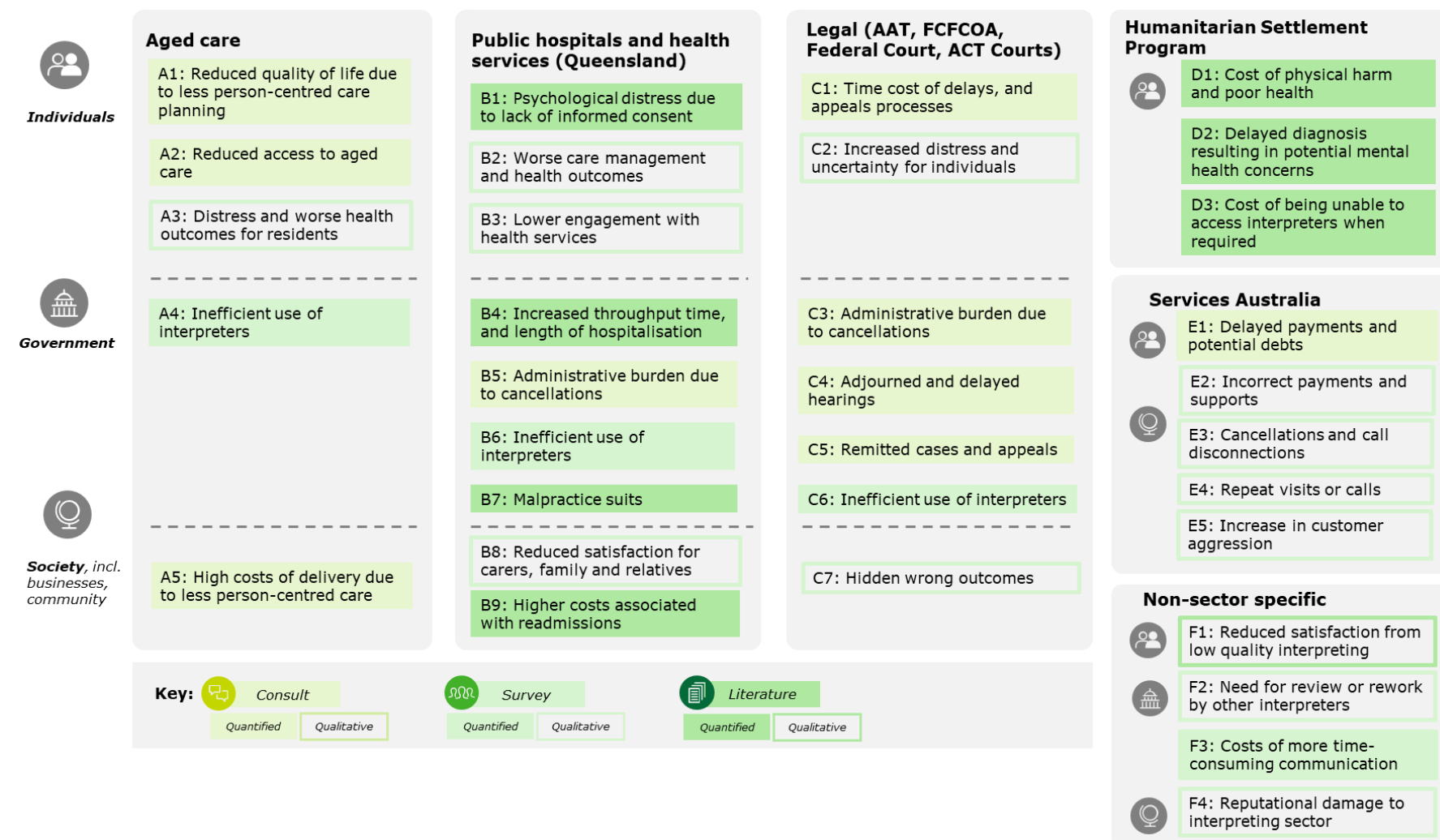[7] United Nations (General Assembly). (1966). International Covenant on Civil and Political Rights.

Table iv: Potential government policy levers in supporting sector sustainability

| Potential Levers | Potential action/recommendation | Potential benefit |
|---|---|---|
| Procurement policy | • Setting standards on quality and mode of service provision.<br>• Setting minimum working and remuneration conditions, given existing variation across LSPs (See Chart 6.3). | • Improve quality of current provision and reduce economic and social costs of *low-quality* interpreting.<br>• Support workforce attraction and retention, which could reduce instances of *unfilled demand* and improve workforce quality. |
| | • Establish a clearer and more consistent set of service-wide data standards.<br>• Support better data collection on interpreter use, quality, and outcomes. | • Building the evidence base required to support future investment in the sector. |
| Awareness and sector engagement | • More engagement with services using interpreters to formalise processes for working with interpreters.<br>• Build awareness in health, disability and aged care sectors on eligibility for free or government funded interpreting services.<br>• Strategic engagement with CALD communities on the importance of accessing formal interpreters. | • Increase utilisation of interpreters and decrease the economic and social costs associated with *latent demand.* |
| Training and strategic workforce planning | • Ensure supply is responsive, and targeted to the right areas.<br>• Increased support for NAATI to expand its language testing capabilities.<br>• Support access to high quality training and certification for interpreters. | • Ensure supply is in the right languages and skills to meet changing needs in demand.<br>• Increase the number of certified interpreters, and ensure increased delivery by certified interpreters. |
| Government cooperation | • A whole-of-government approach across all levels of government to address the issues associated with sub-optimal interpreter access.<br>• Consider the establishment of in-house language services. | • Coordination and consistent approaches to support more effective uplifting of quality and meeting unmet demand. |

Source: Deloitte Access Economics (2023).

**Deloitte Access Economics**

Figure ii: Framework of outcomes resulting from sub-optimal interpreting services

**Individuals**

**Aged care**

A1: Reduced quality of life due to less person-centred care planning

A2: Reduced access to aged care

A3: Distress and worse health outcomes for residents

**Government**

A4: Inefficient use of interpreters

**Society**, *incl. businesses, community*

A5: High costs of delivery due to less person-centred care

**Public hospitals and health services (Queensland)**

B1: Psychological distress due to lack of informed consent

B2: Worse care management and health outcomes

B3: Lower engagement with health services

B4: Increased throughput time, and length of hospitalisation

B5: Administrative burden due to cancellations

B6: Inefficient use of interpreters

B7: Malpractice suits

B8: Reduced satisfaction for carers, family and relatives

B9: Higher costs associated with readmissions

**Legal (AAT, FCFCOA, Federal Court, ACT Courts)**

C1: Time cost of delays, and appeals processes

C2: Increased distress and uncertainty for individuals

C3: Administrative burden due to cancellations

C4: Adjourned and delayed hearings

C5: Remitted cases and appeals

C6: Inefficient use of interpreters

C7: Hidden wrong outcomes

**Humanitarian Settlement Program**

D1: Cost of physical harm and poor health

D2: Delayed diagnosis resulting in potential mental health concerns

D3: Cost of being unable to access interpreters when required

**Services Australia**

E1: Delayed payments and potential debts

E2: Incorrect payments and supports

E3: Cancellations and call disconnections

E4: Repeat visits or calls

E5: Increase in customer aggression

**Non-sector specific**

F1: Reduced satisfaction from low quality interpreting

F2: Need for review or rework by other interpreters

F3: Costs of more time-consuming communication

F4: Reputational damage to interpreting sector

**Key:** Consult — Quantified | Qualitative

Survey — Quantified | Qualitative

Literature — Quantified | Qualitative

Source: Deloitte Access Economics (2023).

# 1 Introduction

This chapter overviews the interpreting sector and the key issues impacting it before setting out the objectives for this project and outlining the remaining chapters of this report.

## 1.1 Demand for interpreting services

### 1.1.1 People with low English proficiency

Australia has one of the most culturally and linguistically diverse (CALD) populations in the world with the second highest proportion of foreign-born citizens in the OECD, reflecting its strong migrant intake.[8] With this comes significant linguistic diversity, noting that 22% of the population reported using a language other than English at home in the 2021 Census.

While most migrants speak English well enough to access government services, there are a significant portion who have barriers to communicating in English. According to the 2021 Census, there are estimated to be 700,000 people (3% of the total population aged five and over), born overseas, over the age of five who are living in Australia who have 'low proficiency' in English.[9] Within this cohort, there are more than 140,000 people who do not speak English at all. The focus in this report is on this cohort, although it is acknowledged that due to the complexity of some government sectors, people who might have higher proficiency may also benefit from the engagement of an interpreter.

Chart 1.1 shows the top ten languages spoken by people with low English proficiency, which account for approximately two thirds of all people with low English proficiency. Mandarin speakers alone account for one fifth of all people with low English proficiency. However, there remains a vast diversity of languages in Australia, with over 200 distinct languages spoken at home per the 2021 Census.

Chart 1.1: Top ten languages spoken by people with low English proficiency
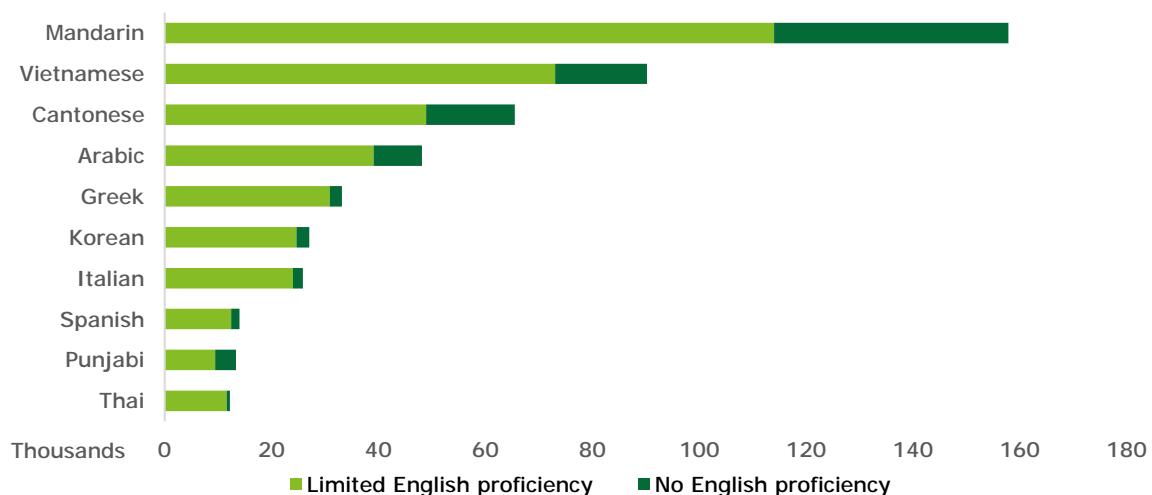


Source: Australian Bureau of Statistics (2022). Sample is taken from overseas born population, over five years of age.

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[8] Australian Government. 2020. Australia is a top 20 country for democracy, diversity and global citizenship. https://www.dfat.gov.au/sites/default/files/australia-is-a-top-20-country-democracy-diversity-global-citizenship.pdf.

[9] In this report, 'low English proficiency' is defined as either having no English proficiency or limited English proficiency.

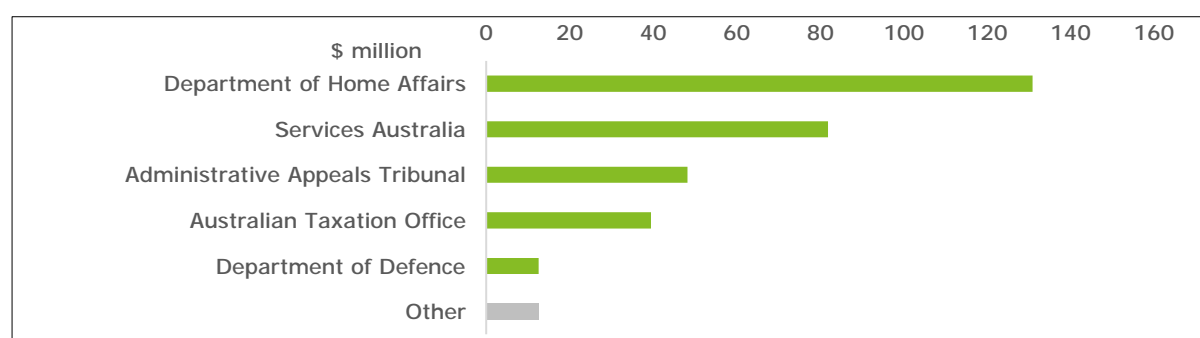### 1.1.2 The role of interpreting services

The interpreting sector plays a critical role in facilitating participation and equitable access to essential services such as government services, medical aid and legal advice for people with no or limited English proficiency in Australia.

The greatest demand for interpreter services is from the public sector, underpinned by government policies and regulations at State, Territory and Australian Government levels, which provide for equal language access by all Australians to key services, including but not limited to:[10,11]

- The detention network and refugee processing
- Medical consultations with general practitioners and in hospitals and mental health facilities
- Courts and police stations
- Emergency situations.[12]

Over the period 2018-2023, the Australian Government has spent an estimated $326 million procuring interpreting services, with the Department of Home Affairs, Services Australia, and the AAT accounting for 80% of total expenditure (Chart 1.2). This represents an expense of $65 million per annum. In addition to the Australian Government, state and territory governments also procure interpreting services. For instance, the Queensland Government reported expenditure on interpreters totalling $15.9 million in 2020-21, with Queensland Health accounting for 80% of the expenditure.[13]

Chart 1.2: Australian Government procurement of interpreter services (2018-2023), by agency



Source: AusTender (2023).

Government procures interpreting services from Language Service Providers (LSPs), with three LSPs accounting for 65% of total expenditure of interpreter contracts with the Australian Government. Each government department or agency is separately responsible for making its own procurement arrangements for interpreting services, with entities with higher more stable demand volumes typically using a standing order arrangement.

In turn, the LSPs typically contract interpreters, with many interpreters obtaining work via one or more LSPs under a labour hire model. The Department of Home Affair's Language Sector Sustainability Survey found that on average, interpreter respondents worked for four LSPs within the past three months. Direct hiring of interpreters is uncommon but may be used where there is high demand for language services, including large hospitals and Services Australia/Centrelink.

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[10] The equal language access obligations for the Australian Government are addressed in several legislative and policy instruments including the Commonwealth Multicultural Access and Equity Policy, Freedom of Information Act 1982 (Cwlth) and the Crimes Act 1914 (Cwlth). These requirements generally extend to government entities and service providers, with strong demand for interpreting services in the healthcare, social services and legal sectors.
[11] Leske, H. (2023). 'The Australian LSP Market: Size and State of the Industry Down Under'. Nimdzi. https://www.nimdzi.com/australia-language-service-market/.
[12] Australian National Audit Office. (2015). 'Management of Interpreting Services'. *Performance Audit Report*, Auditor General Report No. 28 of 2014-15. https://www.anao.gov.au/work/performance-audit/management-interpreting-services.
[13] Multicultural Affairs Queensland reporting on government expenditure on interpreters.

## 1.2    Issues affecting the interpreting sector

Although described by the Australian National Audit Office in 2014-15 as a maturing industry, working conditions for interpreters have long been viewed by the industry as problematic, characterised by insufficient and/or unstable work, high competition in highly represented languages, low wages, and inadequate support and valuation of the profession.[14]

The Department of Home Affairs Language Sector Sustainability Survey found that from the interpreter and translator perspective, the top three key issues that needed to be addressed in the sector included:

- Poor remuneration
- Rebates to pay for higher certifications or expenses
- Additional training and capability training (Chart 1.3).

Chart 1.3: Perceptions of key issues to be addressed in language services sector by interpreters and translators
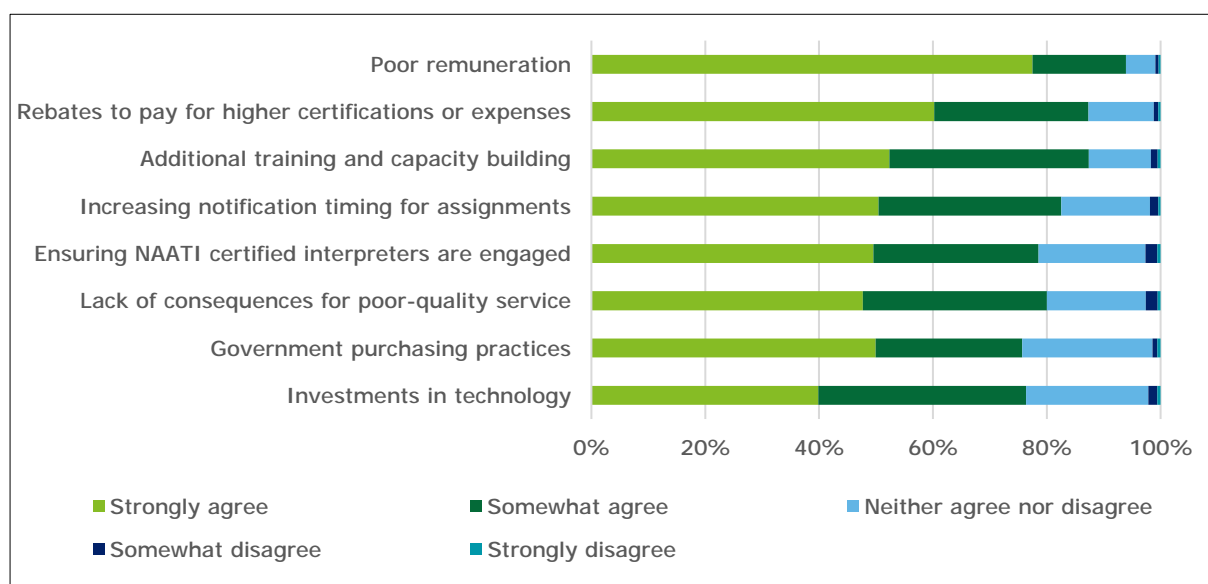


Source: Department of Home Affairs Language Sector Sustainability Survey (2023). Top 10 languages by sample size are shown. N = 1,484. Question = The following issues in the interpreting sector need to be addressed.

Given the importance of interpreting services in supporting equitable access to government services by people with low English proficiency, ensuring the quality and sustainability of the sector is critical.

## 1.3    Project objectives

There is a potential role of government procurement practice in supporting the viability and sustainability of the interpreting sector given the importance of interpreting services in supporting government objectives. In this context, the Department of Home Affairs engaged Deloitte Access Economics to undertake targeted economic analysis into the costs associated with failure to deliver efficient and high-quality interpreting services.

The key questions underpinning this work include:

a) estimating the economic and social costs associated with existing language services for: individuals, businesses, Australian government, state governments and broader society, including through poor quality language services, poor uptake of language services and unmet demand

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[14] Australian National Audit Office. (2015). 'Management of Interpreting Services'. *Performance Audit Report*, Auditor General Report No. 28 of 2014-15. https://www.anao.gov.au/work/performance-audit/management-interpreting-services.

b) estimating how the demand for language services is expected to change in the future, and how supply may change (if nothing is done to address issues impacting the sustainability of the sector)

c) undertaking economic and social cost analysis and identifying risks to government of failing to address these existing market failure issues.

The findings of this research will be used to:

- support any potential future work in considering options for implementing a whole-of-Australian Government coordinated procurement (and contracting) model, and the potential benefits and costs
- inform the Department of Home Affairs in developing its issues paper and developing recommendations for the Australian Government as part of the Multicultural Framework Review.

## 1.4    Navigating this report

The remaining report is structured as follows:

- **Chapter 2** provides the analytical framework informing the scope and approach to this research.
- **Chapter 3** estimates total potential demand for interpreters, and disaggregates demand into different categories to understand the prevalence of sub-optimal access to interpreters across the service delivery case studies.
- **Chapter 4** presents an overview of the types of outcomes that are likely to result from sub-optimal interpreting in the case study service delivery areas.
- **Chapter 5** estimates the total current costs associated with sub-optimal interpreting, drawing on the per unit costs across individuals, government and society (Chapter 4) and the instances of sub-optimal service provision (Chapter 3) across the relevant service delivery case studies.
- **Chapter 6** outlines trends for the key drivers of demand and supply for the interpreting sector, and the potential implications for sub-optimal delivery of interpreting services and the sustainability over the sector out to 2033.
- **Chapter 7** summarises the findings and potential implications and next steps for government.

# 2  Approach

This chapter presents an overview of the approach, including the methodology and data sources considered to capture interpreter service provision, and quantify the costs associated with existing provision of interpreting services across a select number of government settings.

## 2.1    In-scope research areas

This report seeks to estimate the economic and social costs of *spoken interpreting services* in general*.* Translation and AUSLAN, while important parts of the sector, have not been included in the costings. Specific consideration of interpreting arrangements for Indigenous languages is also out of scope for this study.

Interpreting services are used across a wide range of government services and support various interactions – from education and training, through to housing – and it is difficult to capture economic and social costs of the sector comprehensively.

Consequently, Deloitte Access Economics, in consultation with the Department of Home Affairs, determined the key areas of focus for the research and potential case studies for quantification. The key criteria considered in determining the areas include:

- **Scale:** focusing on government services that have a greater reliance on interpreting services
- **Impact:** where a lack of access to interpreting services were more likely to result in higher cost outcomes
- **Relevance:** while noting a significant share of interpreting services are procured through state governments, the focus was on the Australian Government delivery
- **Breadth:** ensuring a range of experiences and interactions are captured through the in-scope research areas.
- **Feasibility:** for the quantified case studies, the available data and strength of existing research was considered.

Based on the above criteria, Figure 2.1 highlights the scope of the research:

- Health, disability and ageing with a focus on:
    - Aged care, which is led by the Australian government and where data is more easily accessible.
    - While the costs associated with health services are significant, delivery and data is fragmented across jurisdictions. Consequently, this study focuses on public hospital and health services in Queensland as a case study.
- Legal services with a focus on:
    - The Administrative Appeals Tribunal (AAT)
    - Federal Circuit and Family Court of Australia (FCFCOA) and Federal Court
    - Australian Capital Territory (ACT) Courts.
- Services Australia.
- The Humanitarian Settlement Program (HSP).

Figure 2.1: In-scope research areas for report
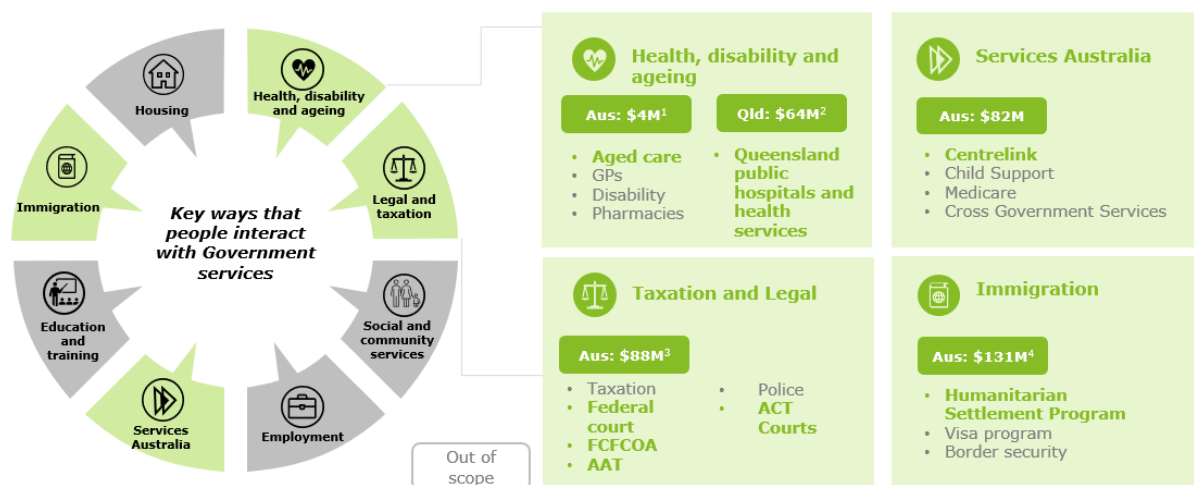


¹Includes the Department of Health and Aged Care and Aged Care Quality and Safety Commission. ²Queensland Government annual expenditure on interpreting in public hospitals and health services is multiplied by five to support comparison with Australian Government procurement figures. ³Includes AAT, ATO and Federal Police. ⁴Includes Department of Home Affairs.

Source: Deloitte Access Economics (2023). Note: The $ figures represent known government procurement of interpreting services (2018-2023) for the relevant agencies in each area of focus.

## 2.2    Overall project approach and evidence sources

The research is exploratory in nature and informed by four key phases (Figure 2.2). Given the breadth of sectors considered and a lack of centralised data collection on interpreting use, quality and outcomes, a range of data sources have been considered.

Figure 2.2: Overview of the research approach
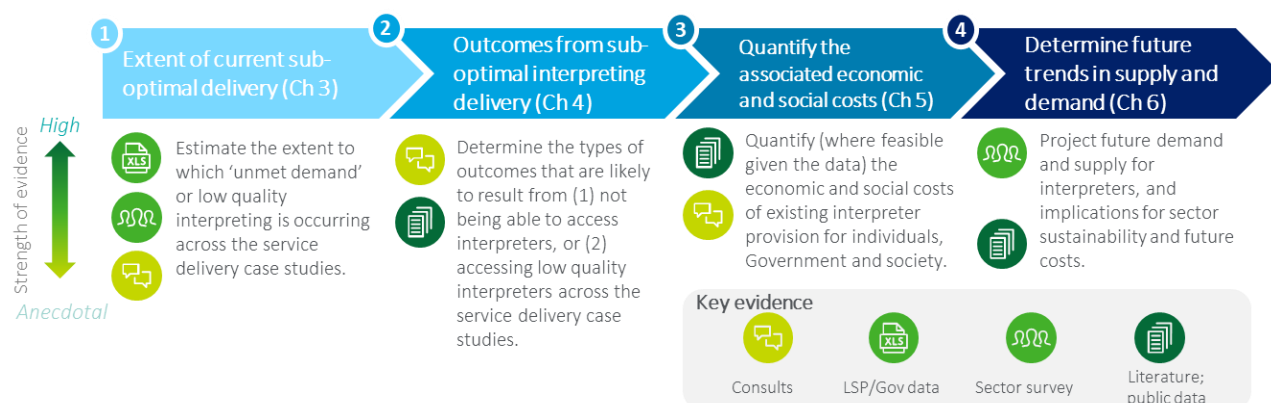


Source: Deloitte Access Economics (2023).

**Literature scan and publicly available data**

A review of the available literature (drawing from both Australian and international sources) and publicly available data was undertaken to support the modelling. These evidence sources are used to:

- provide supporting evidence and research on the degree of unmet demand for interpreting services, particularly where interpreters have not been requested
- develop a framework on the outcomes resultant from not having access to interpreters, and reliance on poor-quality interpreting
- parameterise the social and economic costs of poor health or wrong legal outcomes etc. on individuals, society and government.

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> **Relative strength of evidence:** relatively **high** as the studies typically control for external factors to isolate the impact of interpreting, while the studies capture a sizeable population.

**Sector survey**

Analysis of the Department of Home Affairs Language Sector Sustainability Survey, which captured responses from over 2,200 interpreters and translators, with 1,700 responses from interpreters. The survey provides insights on interpreter perceptions on:

- The extent of poor-quality interpreting
- The types of outcomes resultant from low-quality interpreting
- Interpreters' stated intentions on future attrition.

> **Relative strength of evidence:** **medium** as while the respondents represent a sizable share of the population, results are based on stated intentions and may be potentially biased.

**Data from LSPs and government departments**

Aggregated administrative data was received from eight LSPs. The data provides insights on the fill rate for interpreter requests, the mode of delivery, the workforce, and pricing. Together, the data represents 1.5 million occasions of interpreting in 2022 across Australia. A summary of the service delivery areas covered by the data collection is given in Table 2.1. Note that while Queensland Health provided information on the use of interpreters, Queensland Health's data on hospital admissions or lengths of stay has not been used for this study.

Table 2.1: Data provided by LSPs and government departments

| LSP | Health, disability and Ageing | Legal and taxation | Services Australia | Immigration | Other | Aggregate information |
|---|---|---|---|---|---|---|
| All Graduates | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Amigos | ✓ | | | | | ✓ |
| Queensland Health | ✓ | | | | | ✓ |
| Department of Human Services (SA) | ✓ | ✓ | | | | ✓ |
| Polaron | | | | | | ✓ |
| Language Loop | ✓ | ✓ | | | | ✓ |
| Services Australia | | | ✓ | | | ✓ |
| TIS National | ✓ | | | ✓ | | ✓ |
| Translationz | ✓ | ✓ | | | | ✓ |

Source: Deloitte Access Economics (2023).

> **Relative strength of evidence:** **medium** as while data is only collected from a few providers, two of the five largest suppliers to Australian Government have been captured. Evidence is strongest for health, disability and ageing, with seven respondents providing interpreting in the service delivery area.

**Consultations**

Interviews were conducted with 21 peak bodies, academics, service providers, and government department representatives (Table 2.2). These interviews informed further requests for information to support the analysis. Key findings from the interviews are also included in the report.

Table 2.2: Stakeholder engagement, as of 10 August 2023

| Stakeholder type | Consultee |
|---|---|
| Industry representatives | AUSIT |
| | Professionals Australia |
| | Aged & Community Care Providers Association Ltd |
| Australian Government departments/agencies (service users) | • Services Australia<br>• Administrative Appeals Tribunal<br>• Department of Home Affairs (various areas)<br>• Federal Circuit and Family Court of Australia<br>• Department of Health and Aged Care<br>• Federal Court |
| State/Territory departments/agencies | QLD Health and Multicultural Affairs Queensland, Department of Environment and Science |
| | ACT Office for Multicultural affairs / ACT Justice Directory |
| Other public service entities (service users) | Gold Coast Hospital and Health Service, QLD<br>Cairns and Hinterland Hospital and Health Service, QLD<br>Townsville Hospital and Health Service, QLD |
| Interpreting service providers | All Graduates |
| | TIS National |
| Academic researchers | Dr Erika Gonzalez, RMIT<br>Professor Sandra Hale, UNSW |

Source: Deloitte Access Economics (2023).

**Relative strength of evidence:** relatively **anecdotal** compared to other sources as the findings are anecdotal in nature or rely on high level approximations by stakeholders.

# 3 Disaggregating interpreter demand

This chapter estimates total potential demand for interpreters, and disaggregates demand into different categories to understand the prevalence of sub-optimal access to interpreters across the service delivery case studies.

## 3.1 Estimated total potential demand

*Total potential demand* can be defined as the interactions where a professional interpreter is required. Total potential demand can be thought of as a function of the population accessing the services of interest, and instances where a professional interpreter should ideally be engaged. Based on the Australian Government Language Services Guidelines:

- Government agencies are encouraged to use **NAATI-certified professional interpreters as the default approach** when communicating with people with low English proficiency (LEP).
- Use of a professional NAATI-certified interpreter is recommended particularly for situations when the information or policy is complex or of a legal or technical nature; where required by legislation to engage an interpreter; or where there is a risk of misunderstanding by the client which may result in a risk to themselves or others.
  - Currently, tertiary education qualifications are not considered when engaging interpreters.
- The guidelines **discourage use of friends and family members**, particularly to interpret complex, technical and sensitive information. Children under 18 years of age should not be used as interpreters in any situation.
- In determining an **appropriate mode of interpretation**, agencies are encouraged to consider factors such as communication complexity, setting and the client's individual preference. Video interpreting via secure platforms is increasingly recommended for its accessibility and ability to provide visual cues to facilitate interpretation.

Further, consultations with stakeholders reveal that across all service delivery case studies, there are service delivery guidelines on when professional interpreting services should ideally be engaged.

- In **healthcare, disability and ageing**: a certified interpreter should be engaged when the information to be communicated is significant for health and/or health outcomes, the person requests or indicates that they need an interpreter, or when the person's English skills are assessed to be inadequate for the situation.
- In **legal** settings: under the principle of equitable access to justice no court client should be disadvantaged in proceedings before the Court or in understanding the procedures and conduct of court business, because of a language barrier. The Judicial Council on Cultural Diversity and Inclusion publishes recommended national standards for working with interpreters in courts and tribunals. Depending on the matter under consideration various parties may hold responsibility for arranging an interpreter, including the police and Director of public prosecutions for criminal matters, the AAT for migration hearings and individuals for civil matters. Courts and tribunals may also provide interpreting services to parties with low English proficiency where appropriate.
- In **HSP:** clients must be given the opportunity to communicate their needs in the language of their choice, and a NAATI certified interpreter must be used when discussing issues that are technical or sensitive, such as health, legal or tenancy matters.

Further details on commonly recognised guidelines underpinning employment of professional interpreters are given in Appendix C.

Table 3.1 presents **total potential demand** for professional interpreters across the service delivery areas and is estimated as a function of the total population with low English proficiency and their potential interactions between the case study government service areas.

Table 3.1: Total potential demand used to estimate service delivery in case studies

| Service delivery case study | Total potential demand | Evidence |
|---|---|---|
| **Aged care** | Approximately 16,000 persons aged 65 and over born overseas and whose preferred language is not English who receive home care or permanent residential care in 2022. | AIHW (2023), GEN: aged care data. |
| **Queensland Public Hospital and Health Services** | An estimated 17,000 hospital admissions, 25,000 Emergency Department visits, and 154,000 non-admitted patients in Queensland per annum involving a person with low English proficiency. | Estimated using AIHW data on national hospital admission statistics and Queensland LEP population estimates. |
| **Administrative Appeals Tribunal (AAT)** | Approximately 5,400 hearings conducted in the Migration and Refugee division requiring an interpreter per annum. | Based on AusTender procurement data received from the Department of Home Affairs, and consultations. |
| **FCFCOA and Federal Court** | An estimated 4,700 hearings in the FCFCOA and Federal Court per annum requiring interpreters funded by the Courts (across all courts). The highest demand is in relation to migration proceedings, followed by family law proceedings. | Based on data received from consultations. |
| **Humanitarian Settlement Program (HSP)** | An estimated 27,000 current and past HSP clients with low English proficiency (capturing humanitarian migrants over a five year period). | Based on data received from the Department of Home Affairs on HSP clients, combined with BNLA data on English proficiency over time. |
| **Services Australia** | 448,000 occasions of interpreter sessions. | Based on data received from LSPs. |
| **Courts (ACT)** | *Insufficient data to quantify* | |

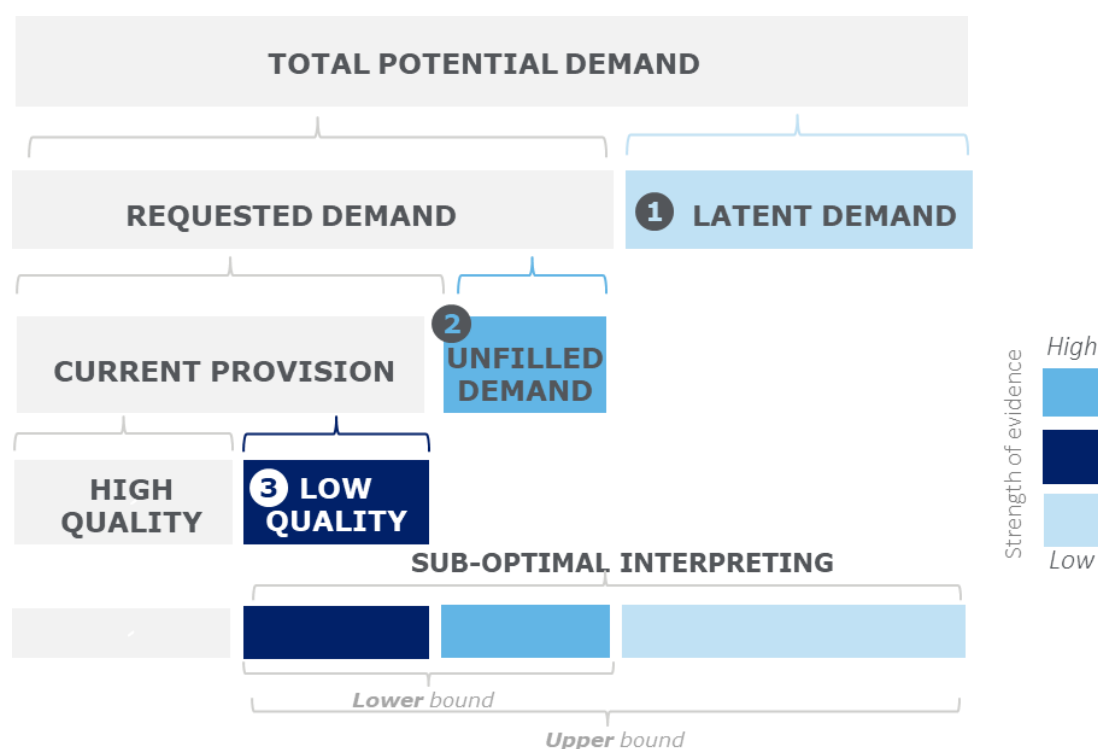Source: Deloitte Access Economics (2023).

## 3.2 Taxonomy of demand

There are different economic and social costs associated with low-quality interpreting and not accessing interpreting. Consequently, a key step of the research is to estimate the prevalence of different types of sub-optimal interpreting.

Conceptually, total potential demand can be decomposed as follows:

- **High quality:** interactions where an interpreter is provided and is of high quality
- **Low-quality:** interactions where an interpreter is provided but is of low quality, resulting in potentially worse outcomes
- **Unfilled demand:** interactions where an interpreter has been requested, but was not filled by LSPs due to interpreter unavailability
- **Latent demand:** interactions where an interpreter has not been requested, either by the service provider or the individual. This could result in interpreting being undertaken on an ad hoc basis by friends and relatives, or not used at all.

Low-quality, unfilled demand and latent demand all contribute to sub-optimal interpreting (Figure 3.1).

Figure 3.1: Decomposing potential demand, and understanding the contributors to sub-optimal interpreting

Based on the total potential demand for interpreting services given in Table 3.1, the proportion of low-quality, unfilled and latent demand is estimated. Further details on the estimation approach is given in the subsequent sections. Chart 3.1 shows the disaggregation in interpreting instances across the government service delivery case studies.

Chart 3.1: Estimated distribution of total potential demand by service delivery areas
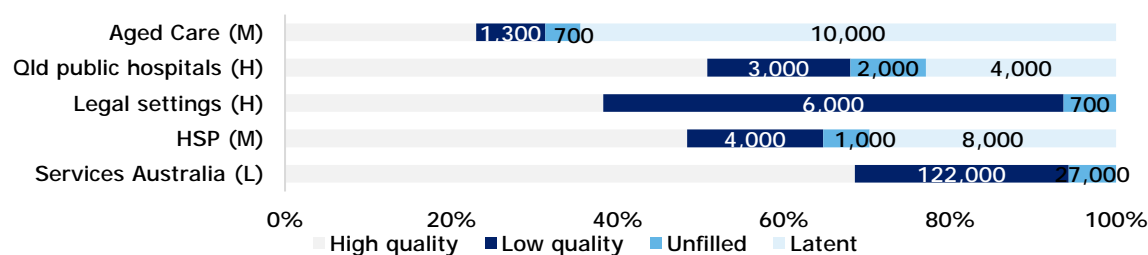
## 3.3    Unfilled demand

Not all requests for interpreters can be fulfilled, for a variety of reasons including an insufficient supply of interpreters of a certain language or other required characteristics (e.g., sex, culture, or interpreting mode).

The proportion of unfilled demand varies across the service delivery case studies (Chart 3.2). In 2022, it was highest for health, disability and ageing (12%) and lowest for Services Australia (6%). From 2019 to 2022, unfilled demand as a share of requested demand has remained fairly constant.

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Services Australia has a different operational model compared to the other settings, and run their language services program via a tiered structure. Where possible, a client with low English proficiency meets with a NAATI certified bilingual staff member to process their claim directly.

If demand cannot be met by bilingual staff, Services Australia has a 1,500 person 'internal panel' of interpreters who are sole traders and directly contracted to Services Australia. If they cannot fill the job from the internal panel, they reach out to one of 12 external language service providers (an 'external panel'). If the external panel cannot fill the job, they go to the open market for language services.

The consultation also revealed the following additional drivers that could potentially contribute to Services Australia's relatively high fill rate:

- **Systems for data capture and analysis of interpreter need and use**: Services Australia maintains records of client interpreting requirements and are able to analyse data to inform their interpreter rostering arrangements. This enables demand and supply planning, and can lead to more efficient use of interpreters and less unfilled demand.
- **Training and support**: to support strong staff awareness of key policies and practices in working with interpreters, and supporting their interpreter staff in obtaining NAATI certification.

Chart 3.2: Average unfilled demand as proportion of *requested demand* across LSPs by service area, 2022
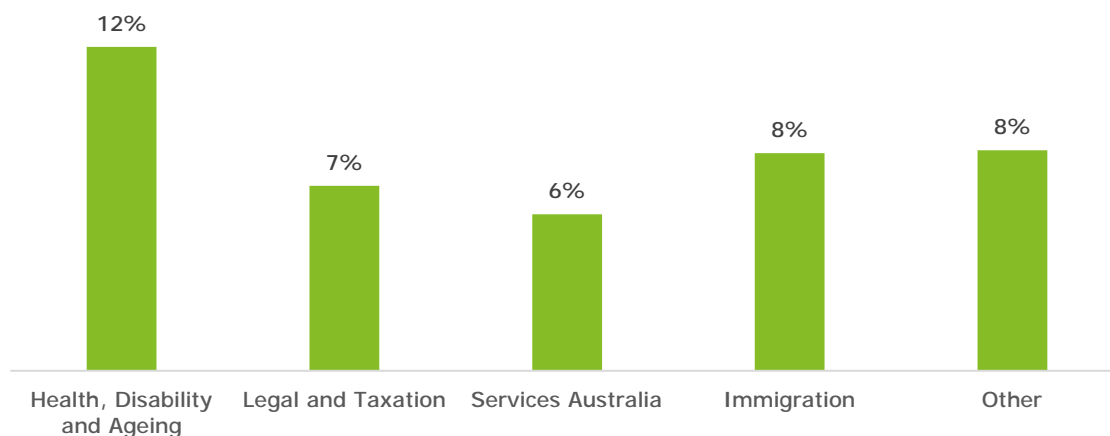


Source: LSP data request (2023)

Across the LSPs that provided data, unfilled demand tends to be lower for the 10 spoken languages that have a higher number of NAATI Certified Interpreters in Australia ('Tier A' languages as defined by the Judicial Council on Cultural Diversity and Inclusion) compared to other languages (Chart 3.3).

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Chart 3.3: Average unfilled demand as proportion of *requested demand* across LSPs by language type, 2022
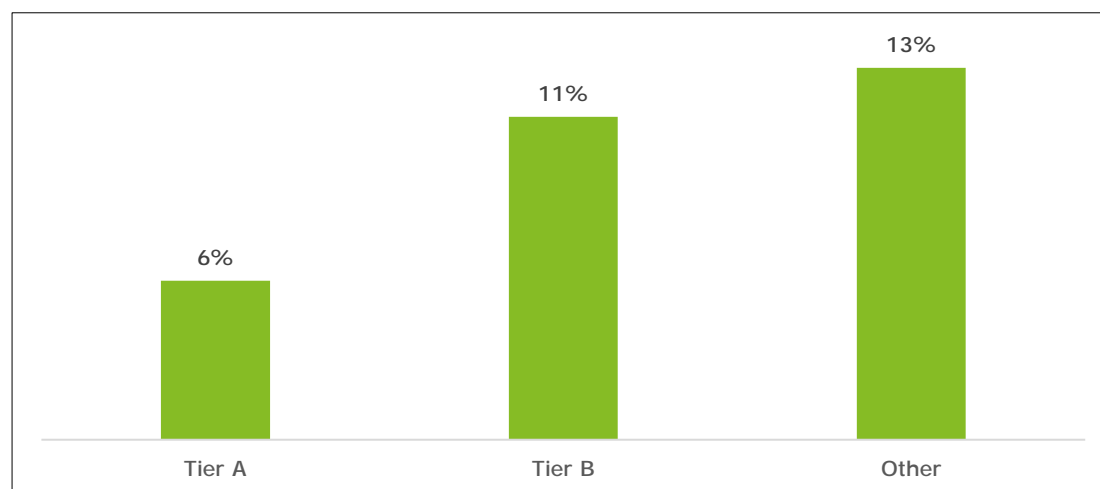


Source: LSP data request (2023). Note: Tier A languages defined based on the Judicial Council on Cultural Diversity and Inclusion's recommended national standards for working with interpreters in courts and tribunals. Tier A captures 10 spoken languages with relatively more NAATI certified interpreters. This includes Arabic, Cantonese, Greek, Italian, Japanese, Mandarin, Persian, Spanish, Turkish and Vietnamese. Tier B captures 17 spoken languages including Bangla, Bosnian, Croatian, Dari, French, German, Hindi, Hungarian, Indonesian, Macedonian, Polish, Portuguese, Russian, Serbian, Sinhalese, Tamil and Thai. Other captures all other spoken languages.

## 3.4    Latent demand

Interpreters are often underutilised, and consequently are not captured in *requested demand*. Identifying instances of latent demand directly is challenging due to a lack of identification and data collection.

The literature and consultations provide some preliminary evidence on the extent to which interpreters are currently being provided across the service delivery areas (Table 3.2).

This is then combined with parameters on the level of unfilled demand (Chart 3.2) to estimate latent demand. The estimated parameters ensure that *latent demand* plus *unfilled demand* plus *current provision* fully accounts for *total potential demand* (as given in Figure 3.1). Further details on how latent demand is derived are given in Appendix D.1.

Table 3.2: Evidence on the level of latent demand across service delivery case studies

| Service delivery | % latent demand* | Evidence on current provision as a % of total potential demand |
|---|---|---|
| Aged care | 65% | Strength of evidence: anecdotal<br><br>• There are limited studies on latent demand for interpreting services in aged care. Based on the existing studies, between 40% to 51% of aged care services report using professional interpreting services. However, the *frequency* and *reason* for use is not given. [15,16]<br>• Utilisation of TIS National government funded interpreting services by eligible aged care providers is significantly lower than expected, with 5,000 occasions delivered per annum, compared to 53,400 persons in aged care (home care and permanent residential care).<br>• Based on a simple average of the available studies and TIS National data, it is assumed that 31% of aged care residents are accessing interpreters. |
| Queensland Public Hospital and Health Services | 23% | Strength of evidence: medium<br><br>• A number of studies have found evidence of inadequate rates of interpreting service provision in hospitals across multiple states, including Queensland, Victoria and New South Wales, with rates of provision varying from 41% to 87%. [17,18]<br>• Across the studies, it is assumed that on average, 68% of hospital patients are accessing interpreters. |
| AAT; FCFCOA (Migration) | Minimal | Strength of evidence: medium<br><br>• Stakeholders indicated that while there are difficulties in finding interpreters and there could be delays, interpreters are always provided when required to ensure procedural fairness.<br>• It is assumed that there is no latent demand and interpreters are always provided outside of instances of unfilled demand (7% as given in Chart 3.2). |
| FCFCOA (Family) | Minimal | Strength of evidence: medium<br><br>• Based on consultations, interpreters are booked where a need is known. However, on a given day, there may be gaps in interpreting provision where an interpreter is unavailable at least some of the time. This could result from last minute interpreter cancellations or delays to proceedings such that the session exceeds the booked time. In those unplanned instances, depending on the nature of the court event, proceedings may continue without an interpreter in some limited instances (e.g., procedural matters and the party has legal representation).<br>• However, these considerations have not been modelled. It is assumed that there is no latent demand and interpreters are always provided outside of instances of unfilled demand (7% as given in Chart 3.2). |
| HSP | 30% | Strength of evidence: medium<br><br>• The Building a New Life in Australia (BNLA) study shows that from 2014 to 2018, 14% of humanitarian migrants reported that language services were |

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[15] futures Upfront. (2015). 'Everyone counts - Why language services matter', 43; cited by FECCA. (2016). 'Australia's Growing Linguistic Diversity: An opportunity for a strategic approach to language services policy and practice'.
[16] Runci, S. J., Eppingstall, B. J., van der Ploeg, E. S., Graham, G. & O'Connor, D. W. (2015). 'The language needs of residents from linguistically diverse backgrounds in Victorian aged care facilities'. *Australasian Journal on Ageing*, 34(3), 195–198. doi:10.1111/ajag.12200
[17] Brophy-Williams, S., Boylen, S., Gill, F. J., Wilson, S., & Cherian, S. (2020). 'Use of professional interpreters for children and families with limited English proficiency: The intersection with quality and safety.' *Journal of Paediatrics and Child Health*.
[18] Garrett P. (2009). 'Healthcare Interpreter Policy: Policy determinants and current issues in the Australian context', *Interpreting & Translation* 1(2), 50.

|  |  | never available when needed. Another 32% reported that interpreters were available some of the time.[19] |
|---|---|---|
|  |  | • Weights are assigned to the different categorical responses to estimate that interpreters are provided in 65% of cases.[20] |
| **Services Australia** | Minimal | There was no available evidence on the extent of latent demand for interpreters when interacting with Services Australia. Conservatively, it is assumed there is no latent demand and interpreters are always provided outside of instances of unfilled demand (6% as given in Chart 3.2). |

Source: Deloitte Access Economics (2023). *Latent demand is reported as a share of *total potential* demand. Estimated based on available information on current provision as a share of total potential demand, and unfilled demand as a proportion of requested demand. Further details on the calculations are given in Table D.1.

### Drivers of latent demand

The consultations revealed a range of potential drivers behind why interpreters are not requested to support interactions with people with low English proficiency:

- **Perceived time and effort:** using professional interpreters can require additional time and effort to coordinate compared with the immediate accessibility of family, friends and bilingual staff. Stakeholders also report challenges in understanding and accessing complex or multiple service provider booking systems.
- **Personal preference and judgement:** some staff may choose not to request a professional interpreter. This may be based on judgement (i.e., perceived need and or circumstances) or preference – namely experience of past challenges in sourcing interpreters, cancellations and/ or poor-quality service provision, which can act as a deterrent to the future use of interpreters.
- **Lack of familiarity on when to request interpreters:** despite organisational guidance discouraging the use of informal interpreters (e.g., bilingual staff, families and friends), some staff may be uncertain on interactions that require interpreters, particularly for perceived lower-risk interactions. Similarly, clients can face challenges when accessing interpreters, and may not know how to access services. Further details on the risks associated with the use of informal interpreters is given in Box 3.1.
- **Staff turnover:** new staff may be less familiar with organisational guidelines on the use of professional interpreters without regular onboarding and training by the organisation. Given high staff turnover in aged care and health settings, it can be difficult to embed a culture of interpreter use.

In addition to these common drivers, there are also specific factors across the service delivery areas that drive latent demand. The key findings are summarised in Table 3.3.

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[19] Department of Social Services. (2022). 'Building a New Life in Australia: The Longitudinal Study of Humanitarian Migrants'.
[20] The following weights are used: always = 100%; most of the time = 75%; some of the time = 50%; never available = 0%.

Table 3.3: Consultation evidence on why interpreters are not requested across service delivery case studies

| Service delivery | Why interpreters are not being requested |
|---|---|
| **Aged care** | • Low awareness by service providers of free interpreting through TIS National. Some service providers are unsure of their eligibility or have trouble accessing interpreting services.<br>• Awareness on the use of interpreters varies across providers and is relatively higher amongst providers with a higher percentage of CALD residents. |
| **Queensland Public Hospital and Health Services** | • Engagement with interpreters differs across business units based on time and effort required to arrange an interpreter, time and performance pressures for the area, and nature and assessed risk of interactions.<br>• Engagement is typically higher for patient consent and theatre operations, and prescription and medication matters (Allied Health), and more variable for emergency department settings, assessment diagnoses and treatment plans.<br>• Reliance on interpreters can also differ based on clinician attitudes on the importance of engaging a professional interpreter versus just 'getting by'.[21] |
| **Legal settings (AAT, FCFCOA, Federal Courts, ACT Courts)** | • There is anecdotal evidence that processes to capture and address interpreter needs are fairly robust, with a robust decision-making hierarchy generally in place to source professional interpreters from multiple sources.<br>• There is also clear guidance to inform decision making around use of alternative (non-professional) interpreting avenues. |
| **HSP** | *Unavailable as the consulted program area has limited visibility of interpreter arrangements used by service providers.* |
| **Services Australia** | • Anecdotal evidence indicates that reliance on client and/or service provider discretion to identify or determine need for interpreting services can give rise to increased risk of unidentified unmet demand.<br>• There may be instances of latent demand where service users are reluctant to request assistance. This could be due to a range of factors, including concerns about incurring additional costs, or where individual service users or staff overestimate the English language ability of the service user.<br>• Parties may also be reluctant to engage an interpreter due to the perception that interpreter use would add to the length of a call duration or appointment (i.e., due to the perceived time cost outweighing the perceived benefit). |

Source: Deloitte Access Economics (2023)

**Box 3.1: Reliance on informal interpreters**

As noted across many stakeholders, professional interpreters may not be requested where the service user or the service provider believe that informal interpreters are available and can be used in place of professional interpreters. Informal interpreters are generally friends, family members or other people from the same linguistic community who are not professional or certified interpreters.

Based on the Department of Home Affairs Language Sector Sustainability Survey of interpreters, **over 45% of interpreters have often or very often heard about family and friends acting as interpreters** for individuals. The most common reasons for this are:

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[21] Diamond et al's (2009) study of physicians in the US found a tendency by study participants to rely on their own limited language skills, patients' family members or other untrained interpreters to communicate with patients with low English proficiency over engaging an interpreter, in a process described as 'getting by', despite recognition of associated risks and that such patients were not receiving equal care. The 2018 study by White et al. made similar observations regarding attitudes by Australian clinicians in Victorian hospitals.

1. People believe the language skills of family members and friends will be sufficient for these interactions
2. People are unaware that there are free interpreter services
3. They require immediate interpretation, which may not be available through interpreter services
4. They do not know how to organise interpreter services.

This is consistent with findings in the literature, with a study of tertiary referral hospitals in Victoria finding that the use of family members as interpreters occurred in at least 49% of included patients during their inpatient stay.[22]

Similarly, the consultations suggest that informal interpreters are seen as a passable substitute where it is difficult to access professional interpreters:

• Health service providers have indicated that geographic remoteness and limitations in supply and access to interpreters, particularly for new and emerging languages, drives increased reliance on family and friends when an interpreter is not available.
• A stakeholder noted that in the FCFCOA, parties may use family or friends as interpreters for more administrative, low risk matters (e.g., directions hearings).
• A further factor cited was privacy concerns over personal information getting out into the community (i.e., lack of trust in external parties) with particular stigma attached to sensitive issues such as domestic violence and mental health.

These responses highlight a potential general lack of knowledge about the role of professional interpreters in facilitating service provision for people with low English proficiency. Many studies show that using informal interpreters is associated with lower quality of interpretation, and may have potential ethical implications (e.g., breach of privacy, conflict of interest, and lack of impartiality or independence).

## 3.5    Low-quality provision

For over a decade, reports from various industry stakeholders have raised concerns about the state of interpreter services in Australia in a variety of settings. Many of these cite the role of poor working conditions, remuneration and inadequate understanding of the profession, amongst other factors, in contributing to systemic underuse of appropriately qualified professional interpreters and poor-quality service.

Based on the Department of Home Affairs Language Sector Sustainability Survey, respondent interpreters and translators are aware of poor-quality interpreting. An estimated 45% of respondents said they were aware of instances of poor-quality interpreting. Of these, over half (56%) believe it occurred often or very often, while only 13% believe it rarely or never occurs. Awareness of poor-quality interpreting occurs consistently across languages, ranging from 35% for Arabic to 67% for Cantonese (Chart 3.4).

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[22] White J, Plompen T, Osadnik C, Tao L, Micallef E, and Haines T. 2018. The experience of interpreter access and language discordant clinical encounters in Australian health care: a mixed methods exploration. International Journal for Equity in Health 17 (151).

Chart 3.4: Prevalence of poor-quality interpreting as perceived by practicing interpreters and translators
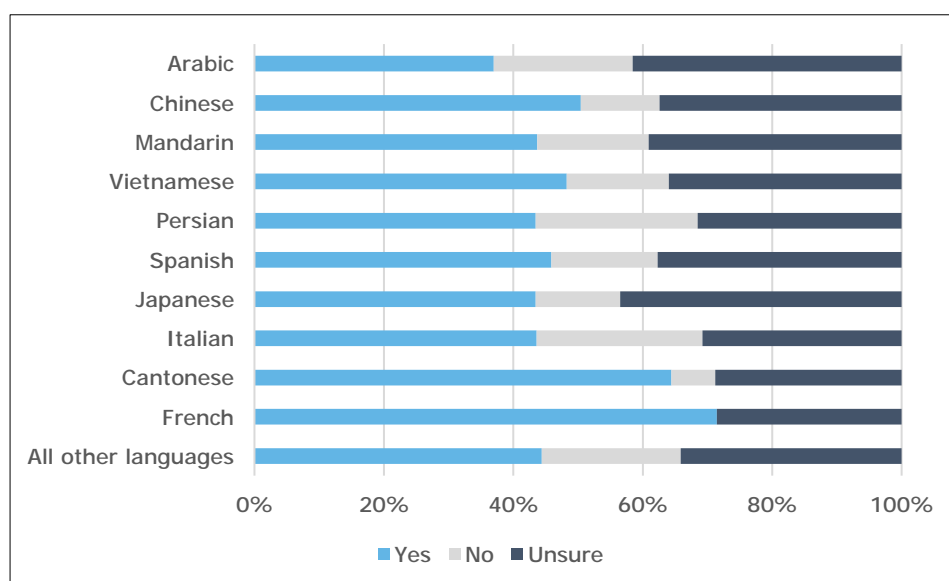


Source: Department of Home Affairs Language Sector Sustainability Survey (2023). Top 10 languages by sample size are shown. N = 1,535. Question: Are you aware of instances of poor-quality interpreting in high-risk assignments (medical, legal, education or police)?

### 3.5.1 Drivers of poor quality

There are a variety of potential reasons for poor quality professional interpreting. Evidence from the stakeholder consultations and responses to the Department of Home Affairs Language Sector Sustainability Survey report the following practices as having a negative impact on interpreting service quality, and in turn, outcomes:

- **Underqualified or inexperienced interpreters taking on complex or technical work** beyond their capabilities. This can include inadequate understanding of medical and legal settings and terminology for accurate interpretation.

- **Unprofessional behaviour by interpreters** including inaccurate interpreting (e.g., inaccuracies, omissions or summation); not acting impartially (e.g., providing advice, advocacy or services outside the scope of professional duties) and other poor behaviour (e.g., poor regard for clients and/or professional responsibilities through for example mixing professional and personal matters).

  - The consultations highlight differences in language skills and effective interpreting across the interpreting cohort, and the importance of the Code of Ethics in guiding the conduct of professional translators and interpreters in Australia and New Zealand.

- **LSPs providing unaccredited and poor-quality interpreters to jobs**. This can include providing interpreters with poor English proficiency and/or poor communication skills.

- **Language discordancy between the patient and the interpreter.** This can include differences in the language or dialect spoken.

- **Working conditions, practices and treatment.** This includes the briefing and background materials provided to interpreters and physical working conditions, with interpreters raising significant concerns about deficiencies in both, which negatively impact their ability to provide quality service.
  - Consultation with interpreting practitioners further highlights challenges for interpreters as external service providers operating or embedding in other service areas, particularly when interacting with other services and professionals. One stakeholder noted that quality is a shared responsibility, however, engaging areas and other professionals do not always follow good practice protocols for working with

> interpreters. This contributes to poor communication and working relationships and consequently affects interpreting quality.

- **Limited systems or processes in place to capture and assess interpreter quality**, with most of the evidence coming from anecdotal accounts from staff.

**Despite the different drivers of quality, quality of interpreting is not directly observed in the data given low instances of reporting on quality issues.**

Consequently, this analysis proxies for quality based on two *quantifiable* factors typically associated with quality – **NAATI certification** level and **mode of interpreting**. While other factors, such as qualification level, could also contribute to interpreter quality, they have not been considered in this study due to limited data.

### 3.5.1.1    NAATI certification level

NAATI's certification system is the primary measure of qualification for interpreters operating in the sector and is designed to evaluate if a practitioner demonstrates the skills needed to practice as an interpreter in Australia, providing assurance to clients on practitioner capability.

The system operates on a tiered basis reflecting various levels of testability, competency and specialisation:

- **Specialist interpreter certifications for the Health and Legal sectors** are tested for six languages. These verify the capabilities of advanced interpreters, who must have extensive knowledge of the relevant operating sector.
- The **Certified Interpreter credential** is tested for 24 languages. It is awarded to higher capability interpreters who have demonstrated a higher level of competence in interpreting and are capable of handling more complex and demanding tasks across a range of non-specialist domains.
- The **Certified Provisional Interpreter credential** is tested for 65 languages. It verifies that an interpreter is capable of interpreting non-complex, non-specialised messages and accurately reflecting the meaning across a range of non-specialist domains.
- **Recognised Practicing Interpreter status** is further provided for low demand languages and languages of new and emerging communities where NAATI testing is not available. This requires evidence of completion of formal training and work practice as a translator and or interpreter.

Based on the consultations, certification of interpreters was frequently identified as an indicator of quality. While there are not any studies examining interpreter quality by level of certification in Australia, the broader literature suggests that interpreters with less experience and training are more likely to make interpreting errors and result in lower quality service provision. For instance, Flores et al (2012) found that occurrence of interpreting errors with clinical significance was 10 percentage points lower for interpreters with more than 100 training hours compared to those with less than 100 training hours.[23]

Across the consulted stakeholders, there is typically a preference for certified interpreters where available. In particular, the Australian Government, Queensland hospitals and various interviewed courts have guidelines in place to preference NAATI certified interpreters.

However, based on data from the respondent LSPs, only 31% of occasions of interpreting service provided were delivered by certified interpreters or interpreters holding specialist qualifications. A further 45% of occasions were delivered by NAATI certified provisional or recognised interpreters, with the remaining 24% delivered by interpreters who do not hold current NAATI certification (Chart 3.5).[24]

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[23] Flores, G., Abreu, M., Barone, C. P., Bachur, R., & Lin, H. (2012). Errors of Medical Interpretation and Their Potential Clinical Consequences: A Comparison of Professional Versus Ad Hoc Versus No Interpreters. Annals of Emergency Medicine, 60(5), 545–553.
[24] This can include individuals who do not hold any certification or hold *legacy* NAATI credentials.

Chart 3.5: Occasions of interpreting provided by interpreter certification, 2022
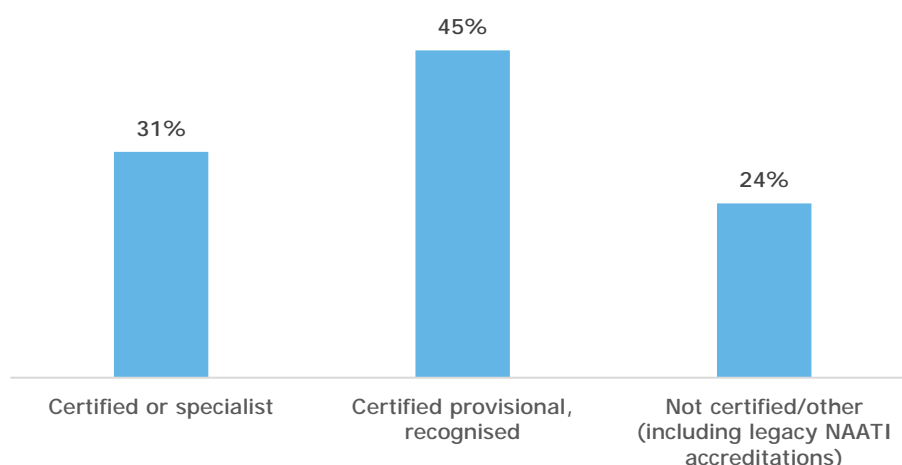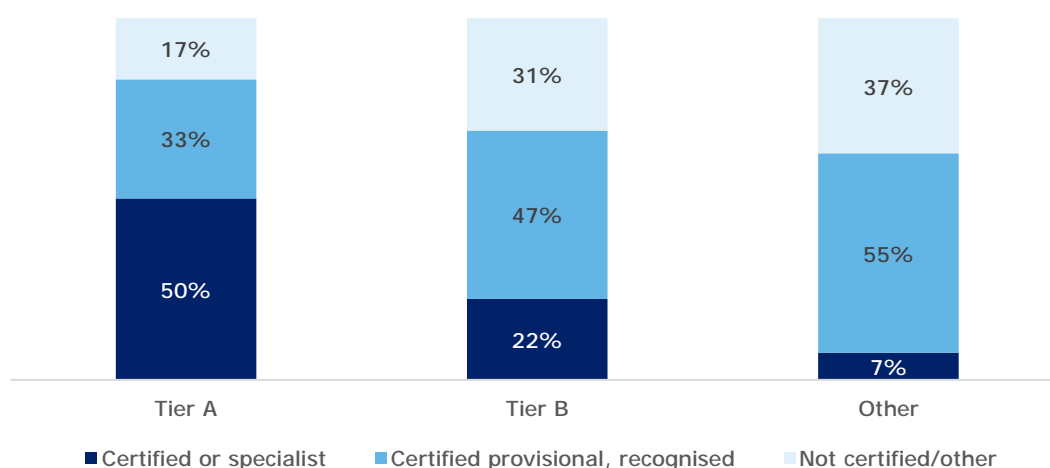


Source: LSP data requests (2023)

Engagement of interpreters with NAATI certification differs by language. For the 10 international spoken languages designated by the Judicial Council on Cultural Diversity and Inclusion as 'Tier A' (these language have at least 100 certified interpreters across Australia), engagement tends to be higher compared to other languages. However, even then, NAATI-certified or specialist interpreters are only used in 50% of occasions of service provision, with 17% of occasions delivered by interpreters without current NAATI certification. The use of interpreters without current NAATI certification increases for less common languages, at 31% for 'Tier B' languages, and 37% for all other languages (Chart 3.6).

While the use of interpreters without current NAATI certification is likely to be in part due to supply constraints, it may also reflect other potential issues. In the sector survey, 39% of interpreters strongly agree or somewhat agree there are LSPs that deliberately choose to use non-NAATI certified interpreters.

Chart 3.6: Occasions of interpreting provided by interpreter certification, by language type, 2022



Source: LSP data requests (2023). Note: Tier A languages defined based on the Judicial Council on Cultural Diversity and Inclusion's recommended national standards for working with interpreters in courts and tribunals. Tier A captures 10 spoken languages with relatively more NAATI certified interpreters. This includes Arabic, Cantonese, Greek, Italian, Japanese, Mandarin, Persian, Spanish, Turkish and Vietnamese. Tier B captures 17 spoken languages including Bangla, Bosnian, Croatian, Dari, French, German, Hindi, Hungarian, Indonesian, Macedonian, Polish, Portuguese, Russian, Serbian, Sinhalese, Tamil and Thai. Other captures all other spoken languages.

**Commercial-in-confidence**

Source: Deloitte Access Economics (2023)

<div style="background-color:#d6ebf5; padding:1em;">

**Box 3.2: Consultation insights on interpreter certification**

From a service user perspective, views on the relationship between interpreter certification and service quality are mixed. Several consulted stakeholders identified potential linkages between low or no interpreter certification and poor service quality. However, another stakeholder considered quality to be individually determined, with some uncertified interpreters performing just as well as their certified counterparts, and conversely, instances where certified interpreters perform poorly.

Recognising that interpreters with tested NAATI certification are unlikely to be available in all instances of interpreting need (i.e., for less common languages), consultation stakeholders emphasised the importance of having more supports in place to minimise risk when working with lower level or uncertified interpreters. This could include:

- Starting less experienced interpreters on more simple 'low risk' situations to build up their experience
- Using multiple interpreters working in tandem to combat fatigue and provide quality assurance.

</div>

### 3.5.1.2    Mode of interpreting

Evidence from literature and consultations indicates that remote interpreting (telephone and videoconferencing) could potentially compromise interpreting quality. This can result from (1) technological challenges (e.g. bad connections) and (2) interpreting being more difficult in remote settings. For example, stakeholders note that a lack of visual cues (for telephone interpreting) and more distractions in remote delivery could lead to lower rates of engagement with the service users.

The literature suggests that telephone interpreting is estimated to reduce interpreting quality by between 10% to 46% when compared to in-person and videoconference interpreting.[25],[26] Consultations further indicate that telephone interpreting is particularly ill-suited for multi-party dialogue due to challenges in identifying speakers. As a result, service areas with a higher proportion of interpreting services conducted over telephone are at greater risk of low-quality interpreting.

Consultations suggest that while on-site interpreting is the preference for many government service areas – particularly for hospitals and courts – actual delivery is significantly lower (Chart 3.7). Across the respondent LSPs, 47% of interpreting sessions are typically delivered via telephone. This includes in high-risk settings (44% for health, and 58% for legal settings).

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[25] Anttila, A., Rappaport, D. I., Tijerino, J., Zaman, N., & Sharif, I. (2017). Interpretation Modalities Used on Family-Centered Rounds: Perspectives of Spanish-Speaking Families. Hospital Pediatrics, 7(8), 492–498.
[26] Hale, S., Goodman-Delahunty, J., Martschuk, N and Lim, J. (2022). 'Does interpreter location make a difference?: A study of remote vs face-to-face interpreting in simulated police interviews. Interpreting.' *International Journal of Research and Practice in Interpreting.* 24. 10.1075/intp.00077.hal.

Chart 3.7: Interpreting services provided by mode of delivery across government service delivery areas for average LSP respondent, 2022
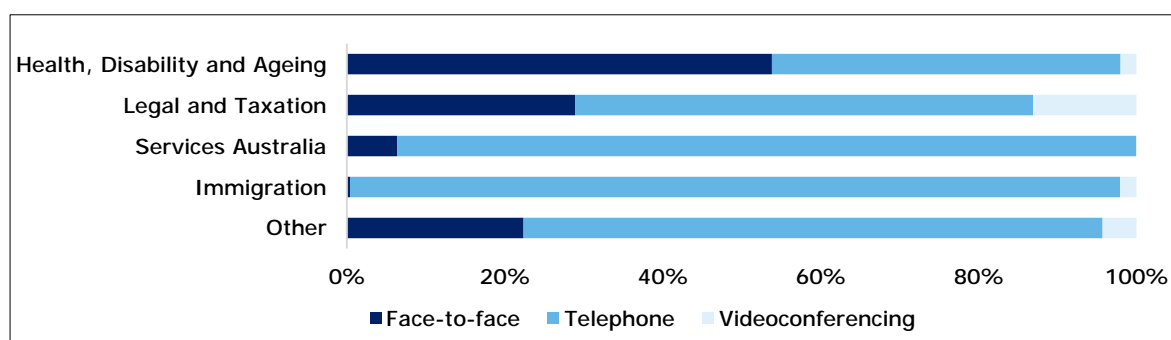
COVID-19 has had an impact on the mode of delivery. Based on data responses received from participating LSPS, from 2019 to 2022, on average there has been a 19% reduction in the proportion of interpreting occasions delivered face-to-face. While there has been a minor increase in the use of videoconferencing – which is associated with quality that is comparable to face-to-face interpreting – the majority of the growth has been in telephone interpreting (Chart 3.8).

There is some evidence from the consultations that the use of remote delivery is becoming entrenched. A number of service delivery representatives have observed a reduction in the availability and potentially willingness of interpreters to provide in-person interpreting services compared to video interpreting. This potentially reflects more favourable conditions for interpreters from remote working, including increased flexibility, reductions in travel times, and increased ability to make back-to-back bookings.

Chart 3.8: Change in provision by mode of delivery for average LSP respondent, 2019-2022

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**Box 3.3: Factors affecting the choice of interpreting mode**
Based on consultations, other interrelated factors that determine the mode of delivery include:

- **Geographical location and language prevalence of interpreters**: hospital and court service providers, and in particular, regional providers (ACT courts and Queensland hospitals), reported that distance and scarcity of local interpreters significantly impacted access and availability of in-person interpreting. This in turn leads to greater reliance on remote interpreting.

- **Cost considerations:** stakeholders in hospitals and courts cited interpreter travel costs and budgetary limitations as posing further barriers to engaging external (non-local) interpreters to provide in-person services.

    - Costs associated with interpreter travel may not be covered in organisational budgets (for service providers) or arrangements with LSPs, and managerial-level

> staff in service providers and interpreters are reluctant to incur such costs, resulting in higher reliance on remote interpreting.
>
> - **Nature of service delivered:** impacts mode choice, reflecting relative time and or performance pressures, priorities and risk. For example:
>
>   - Hospital clinics are more likely to use booked in-person interpreting services,
>
>   - Emergency departments are more likely to use on-demand telephone interpreting, reflecting the on-demand nature of their services,
>
>   - Courts may use remote interpreting for more procedural (pre-hearing) matters but place higher onus on obtaining on-site interpreting services for hearings, particularly where these involve creditability assessments or other sensitivities.
>
> - **Personal, cultural and other sensitivities:** representatives from aged care, hospitals and courts noted that in locations with small language communities where conflict of interest risk between interpreters and service users is high, service providers may prefer use of remote interpreting to manage patient confidentiality concerns, or for cultural and other reasons (e.g., gender specific requirements for gynaecological interactions or domestic violence cases).
>
> - **Unexpected developments (cancellations, delays and overruns):** representatives from hospitals and courts noted that last minute cancellations or early departure by booked interpreters, or delays and time overruns in appointments and hearings may necessitate the use of remote on-demand interpreting.

### 3.5.2    Quality of interpreting across the service delivery areas

Assessing quality of interpreting is challenging, reflecting the relative lack of direct or comparable studies across sectors to measure interpreting quality, lack of comprehensive data on direct service user experience (e.g., via feedback surveys or complaints) and the subjective nature of feedback. However, consultations provided some evidence on differences in the quality of interpreting across the service delivery case studies. There is anecdotal evidence that *poor quality* interpreting is relatively more common in legal and health, disability and ageing settings (Table 3.4).

Table 3.4: Evidence on quality of interpreting across service delivery areas

| Service delivery | Low-quality interpreting | Perceptions of interpreter quality by stakeholders |
|---|---|---|
| Aged care | Relatively common | The Department of Health and Aged Care report being aware of some criticism regarding the quality of interpreting. However, it is difficult to determine the extent of this across the population, and significance in terms of impacts. |
| Queensland Public Hospital and Health Services | Relatively common | Formal feedback on interpreter performance is relatively infrequent and not consistent across regions. However, it was noted that this may reflect clinicians being more focused on managing appointments and addressing issues as they arise, rather than raising a formal complaint. There are also concerns that there may not be clear formal processes in place for managing complaints. |
| Legal | Very common | Evidence on service quality in Australian courts is primarily anecdotal. Key issues with quality tend to arise around (1) the completeness and/or accuracy of information being relayed by interpreters, (2) issues with poor English proficiency from interpreters, and (3) differences in language or dialect between assigned interpreters and service users. [27] One study found that judicial officers and tribunal members often complained about the poor quality of interpreting services, with a significant proportion of judicial officers (over 70%) indicating that they were dissatisfied with interpreting services at least sometimes. Despite the issues raised, formal complaints regarding interpreters are fairly rare – based on one estimate, one complaint every two years from a litigant perspective, with judges and judicial officers also likely to identify and address issues as they arise rather than file a complaint. |
| Humanitarian Settlement Program (HSP) | Relatively common (health) | *Not available* |
| Services Australia | *Mixed evidence/ unknown* | Overall, stakeholders from Services Australia rated the professionalism and quality of interpreting as being very high, with few customer complaints regarding interpreter service. The stakeholders assessed that there were rare to no instances of adverse outcomes which would result in financial loss to clients, reflecting careful case management. However, consultation with interpreter and language service provider stakeholders conversely indicated concerns regarding the impact of Services Australia's procurement practices on service quality and sustainability. Similarly, anecdotal evidence from interpreters participating in the Department of Home Affairs Language Sector Sustainability Survey indicated concerns with interpreting quality in Services Australia. |

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[27] Hale, S and Australasian Institute of Judicial Administration. (2011). 'Interpreter policies, practices and protocols in Australian courts and tribunals : a national survey'

Based on (1) existing evidence on the *relative* likelihood of low-quality interpreting across the service delivery case studies and (2) data on the use of quality interpreters, Deloitte Access Economics estimates the proportion of current provision that is likely to result in low-quality interpreting (Table 3.5).

As an example, low quality interpreting is estimated to be most prevalent in legal settings, occurring in 59% of services provided. This is based on:

- The assumption that there is a high base rate risk of low-quality interpreting in the setting (50%) due to the highly complex and technical nature of the interpreting required, and limited opportunities for interpreters to be briefed on the hearing. See Table 3.4 above for further details.
- A risk multiplier factor of 1.18. This accounts for the setting's reliance on interpreters with low or no NAATI certifications and telephone interpreting (based on the LSP data request). Evidence from the literature suggests that the use of telephone interpreting is associated with a 31% increase in risk compared to in person and videoconference interpreting, while the use of interpreters without certification is associated with a 19% increase in risk compared to interpreters with Specialist Interpreter certifications and Certified Interpreter credentials.

Using a similar process, an overall risk of poor-quality interpreting is estimated across the other service delivery case studies, ranging from 25% to 59% of current provision. Further details on the underlying modelling parameters are given in Appendix D.2.

Table 3.5: Estimated instances of poor quality interpreting and key assumptions

| | (1) Base rate risk of low-quality interpreting | (2) Risk multiplier factor due to interpreters employed | (3) Overall risk of poor quality interpreting |
|---|---|---|---|
| Approach | Informed assumption (see Table 3.4) | Literature, LSP data request (see Appendix D.2) | (1) X (2) |
| Aged care | 20% | 1.33 | 27% |
| Qld Public Hospital and Health Services | 20% | 1.27 | 25% |
| Legal settings | 50% | 1.18 | 59% |
| HSP* | 20% | 1.27 | 25% |
| Services Australia | 20% | 1.36 | 27% |

Source: Deloitte Access Economics (2023). *HSP based on health context and uses the same parameters as Queensland public hospital and health services.

# 4 Outcomes of sub-optimal interpreting

This chapter presents an overview of the types of outcomes that are likely to result from sub-optimal interpreting in the case study service delivery areas.

## 4.1 Economic and social costing framework and approach

Deloitte Access Economics has developed a framework to demonstrate the range of social and economic costs that are likely to result from 'sub-optimal interpreting' outcomes. These outcomes can result from both:

- Instances where individuals are unable to access interpreters
- Instances where individuals are working with low-quality interpreters.

The framework has been developed based on a range of sources, including evidence from the literature scan, consultation with service providers, and the sector survey. The outcomes are organised based on the stakeholders that are likely to be affected:

- **Individuals:** the person who requires interpreting services but receives no professional interpreting or low-quality interpreting. Worse outcomes can result in a range of costs to such individuals, including time, financial costs, and/or other intangible costs.
- **Government:** State and Australian Governments that deliver the services in the case studies. Worse interpreting outcomes can result in less efficient use of government resources, leading to higher financial and resource costs.
- **Broader society:** captures a range of other parties who may be indirectly affected by poor interpreting and its outcomes. This includes businesses, family, friends and the community, and broader society. This category is also used where multiple stakeholders are affected and it is difficult to separately estimate the cost for each party.

The potential first-round outcomes of sub-optimal interpreting across the service delivery case studies are given in Figure ii.

### 4.1.1 Non-sector specific costs

Across all sectors, there is strong and consistent evidence that sub-optimal interpreting is a key barrier to communication and can result in a range of negative outcomes for individuals, government and broader society (Table 4.1).

Table 4.1: Description of costs from sub-optimal interpreting, non-sector specific and costs common across multiple sectors

| # | Cost | Description |
|---|------|-------------|
| F1 | Reduced satisfaction with low-quality interpreting | Poor quality interpreting (whether due to interpreter capability, the mode of delivery or reliance on informal interpreters) is associated with decreased interpreting accuracy and a reduced comprehension of the interpreted material. This results in reduced satisfaction and engagement by both the person with low English proficiency and the service provider. |
| F2 | Need for review or rework by other interpreters | Where instances of poor-quality interpreting have been identified, this may lead to a need for the work to be reviewed by a different interpreter to verify interpreting accuracy. This results in additional effort and costs, and delays for all involved parties. |
| F3 | Costs of more time-consuming communication | Sub-optimal interpreting is likely to be more time consuming, as there are likely to be more interpreting errors, resulting in misunderstandings and the need to repeat and clarify points. This is likely to represent an additional cost to both the individual and the service provider. |
| A4, B6, C6 | Inefficient use of interpreters | Based on the Department of Home Affairs Language Sector Sustainability Survey, 40% of interpreter respondents report that their booked time is wasted either 'very often' or 'often'. This could result from waiting for a doctor to finish with other patients, or the court to finish with other witnesses or waiting for a case to be allocated to a court. This results in a cost to government as interpreters need to be booked for longer periods of time, reducing their availability and affecting LSPs' ability to supply interpreters for other jobs. |
| B5, C3 | Administrative burden due to cancellations | Stakeholder consultations suggest that there are instances where interpreters cancel at the last minute. This could potentially result from instances where they have a better job lined up. These cancellations result in the need for an appointment to be rescheduled, or for alternative interpreting arrangements to be made, which represents an administrative cost to service providers. |
| F4 | Reputational damage to interpreting sector | Repeated instances of poor experiences with professional interpreters could potentially undermine the reputation of the profession, and service providers' willingness to engage with the sector. This could in turn encourage higher reliance on self, family or friends as informal interpreters, exacerbating risks associated with poor quality interpreting. |

Note: # refers to the cost item in the framework figure.

### 4.1.2 Aged care

Communication difficulties also can lead to worse service delivery, with the nature of the outcomes idiosyncratic to the service delivery areas. In aged care, inadequate access to professional interpreters or working with low-quality interpreters can result in a range of poor outcomes for aged care residents, which in turn is associated with higher costs of delivery (Table 4.2).

Table 4.2: Description of costs from sub-optimal interpreting, aged care

| # | Cost | Description |
|---|------|-------------|
| A1 | Reduced quality of life due to less person-centred care planning | Consultations with the Department of Health and Aged Care suggested that while interpreters are used relatively more frequently in legal or contract matters, they are used less on an ongoing basis to support care planning, resulting in less person-centred care.<br><br>There is strong evidence in the literature that person-centred care supports quality of life and improves sense of security and dignity for residents. Person-centred care is associated with a 3% to 12% increase in quality of life, and effects tend to be greater for nursing home residents with dementia.[28] |
| A2 | Reduced access to aged care | There is strong evidence that people from low English proficiency backgrounds access aged care services at lower rates compared to people from English speaking backgrounds. While the difference in access is likely to result from a range of factors – including differences in culture, awareness and need – communication is likely to be a contributor. There is anecdotal evidence from the consultations that issues with interpreters can discourage people from applying for or accessing aged care services. While reduced access to services may initially represent a cost saving to government, it can result in higher downstream costs to individuals, government and society in the future. This can arise from increased time off work or exit from the workforce for carers, or more negative health impacts for individuals and carers who may struggle to manage specialist care requirements without assistance or need for more expensive care in the future. |
| A3 | Distress and poor health outcomes for residents | Language services play a key role in facilitating social access and participation by people with limited English proficiency, contributing to individual wellbeing and feelings of empowerment. [29] Sub-optimal interpreting provision can lead to users of aged care services being unable to make informed decisions about their care and health due to inability to access or understand key information. They may also struggle to clearly articulate their care requirements or health problems, leading to inadequate services and treatment. In both cases, this can exacerbate feelings of distress, frustration and disempowerment, and lead to poor health outcomes. |
| A5 | Higher costs of delivery due to less person-centred care | Interpreting is expected to facilitate cheaper, more personalised care. Evidence from the literature indicates that person-centred care for people in nursing homes or in community care is associated with a reduction in costs compared to non-person-centred care approaches. The cost savings result from lower accommodation charges and health and social care costs for patients. The cost saving are typically between 14% and 16% when compared to non-person-centred care approaches.[30] |

Note: # refers to the cost item in the framework figure.

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[28] Jones, C. (2010). 'Cultural Change and Quality of Life in Elderly Persons Living in Long Term Care', *UNF Graduate Theses and Dissertations*, 423; McGilton, K., Rochon, E., Sidani, S., Shaw, A., Ben-David, B., Saragosa, M., Boscart, V., Wilson, R., Galimidi-Epstein, K. and Pichora-Fuller, M. (2016). 'Can we help care providers communicate more effectively with persons having dementia living in long-term care homes?', 32(1) *American Journal of Alzheimer's Disease & Other Dementias* 41; Yasuda, M and Sakakibara, H. (2016). 'Care staff training based on person-centred care and dementia care mapping, and its effects on the quality of life of nursing home residents with dementia', 21(9) *Aging & Mental Health* 991.

[29] Federation of Ethnic Communities Councils of Australia (FECCA). (2016). Australia's Growing Linguistic Diversity: An opportunity for a strategic approach to language services policy and practice.

[30] Ballard, C., Corbett, A., Orrell, M., Williams, G., Moniz-Cook, E., Romeo, R., Woods, B., Garrod, L., Testad, I., Woodward-Carlton, B., Wenborn, J., Knapp, M and Fossey, J. (2018). 'Impact of person-centred care training and person-centred activities on quality of life, agitation, and antipsychotic use in people with dementia living in nursing homes: A cluster-randomised controlled trial', 15(2) *PLOS Medicine* e1002500; Kari, H., Äijö-Jensen, N., Kortejärvi, H., Ronkainen, J., Yliperttula, M., Laaksonen, R and Blom, M. (2022). 'Effectiveness and cost-effectiveness of a people-centred care model for community-living older people versus usual care – A randomised controlled trial, 18(6) *Research in Social and Administrative Pharmacy* 3004.

### 4.1.3    Public hospital and health services (Qld)

In hospital and health service settings, sub-optimal interpreter access can result in adverse incidents and harm to patients, including poor health outcomes for the patient, resulting in higher costs of delivery for the hospital. This represents a cost to government and broader society as the in-scope health services are publicly funded (Table 4.3).

Table 4.3: Description of costs from sub-optimal interpreting, hospitals and health services

| # | Cost | Description |
|---|------|-------------|
| B1 | Psychological distress and lack of informed consent | Anecdotal evidence from consultations, literature and the Department of Home Affairs Language Sector Sustainability Survey highlights instances of procedures being carried out without appropriate informed consent. This can result from: <br><br> • inadequate disclosure and consent procedures (i.e., inadequate communication with patients or carers), <br> • inadequate patient understanding of procedures due to poor quality or inadequate interpreting, or <br> • reliance on family members for interpretation, resulting in misrepresentation of procedures and/or patient consent (i.e., poorly informed consent).[31] <br><br> Operations conducted without informed consent can result in significant unnecessary patient distress. |
| B2 | Worse care management and health outcomes | A range of evidence sources suggest that negative health outcomes may arise from sub-optimal interpreting provision. Evidence from the literature suggests that underutilisation of professional interpreters is fairly common in hospital settings, reflecting the discretionary nature of the service, and that clinicians spend less time communicating with patients with low English proficiency, compared with English proficient patients due to language discordancy issues.[32] Inadequate consultation and communication with patients with low English proficiency can negatively impact patient understanding, empowerment and wellbeing. Miscommunication or inadequate understanding of aftercare and medication instructions can lead to higher risk of non-compliance with care instructions and worse health outcomes. |
| B3 | Lower engagement with health services | Evidence from literature indicates that in the absence of appropriate access to quality interpreting services, people with low English proficiency have lower engagement with health and preventative health services.[33] According to the ABS National Health Survey (2018) people who speak a language other than English at home were five percentage points more likely to report difficulty with *navigating the healthcare system.*[34] <br><br> Inadequate access to interpreting services may deter people with low English proficiency from accessing preventative health services or |

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[31] See for example Rowse, J., Anderson, K., Phillips, C and Chan. B. 2016, 'Critical case analysis of adverse events associated with failure to use interpreters for non-English speaking patients. The Australian National University. http://hdl.handle.net/1885/267397

[32] Diamond, L., Schenker, Y., Curry, L., Bradley, E. & Fernandez, A. (2009). 'Getting by: underuse of interpreters by resident physicians.' *Journal of General Internal Medicine*, 24(2), 256-262. White J, Plompen T, Osadnik C, Tao L, Micallef E, and Haines T. 2018. The experience of interpreter access and language discordant clinical encounters in Australian health care: a mixed methods exploration. International Journal for Equity in Health 17 (151).

[33] Khatri R and Assefa Y. (2022). 'Access to health services among culturally and linguistically diverse populations in the Australian universal health care system: issues and challenges'. *BMC Public Health*, 22(1):880. doi: 10.1186/s12889-022-13256-z. PMID: 35505307; PMCID: PMC9063872.

[34] Australian Bureau of Statistics. (2018.) 'National Health Survey: First results, 2017-18 financial year.' https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release

attending Emergency Departments (EDs), resulting in delays in accessing health services and exacerbating underlying conditions.

More broadly, other factors may also prevent individuals with low English proficiency from accessing health or other government services. For instance, this can include mental illness stigma.

| B4 | Increased throughput time, and length of hospitalisation | Length of stay (LOS) and throughput times are quality indicators that assess overall hospital care performance. A range of Australian and international evidence shows shorter LOS for patients only using professional interpreters in the emergency department: |
|---|---|---|

- Grover et al (2012) find that throughput times were shorter in instances where patients used in-person interpreters (116 minutes) compared to telephone interpretation (141 minutes).[35] Longer throughput time can result from additional testing and patient reassessment arising from poor communication around patient symptoms, and difficulties in establishing medical histories leading to prolonged consultations.[36]

- Greer et al (2018) find that length of stay is 34% longer where professional interpreters have not been used.[37]

| B7 | Malpractice suits | There are significant risks with respect to the potential for highly adverse outcomes arising from miscommunication, misunderstanding and overreliance on professional capabilities without sufficient due diligence.

One case, cited by Bird (2010), refers to a complaint to the Australian Medical Board following a patient's death from deep vein thrombosis. This highlights the risks for GPs of failing to engage a professional interpreter and when making assumptions regarding the adequacy of patient and family members' English proficiency and comprehension when discussing significant, potentially life-threatening conditions.[38] These instances could result in malpractice suits, which represent a financial and reputational risk to service providers. |
|---|---|---|

| B8 | Reduced satisfaction for carers, family and relatives | In addition to affecting the patient, communication issues on the potential risk and/or severity of a condition, or the aftercare and medication requirements can also negatively affect carers, family and relatives. The Federation of Ethnic Communities Councils of Australia (FECCA) notes that children often bear the brunt of interpreting responsibility due to their capacity to pick up languages faster than adults and as such may be exposed to complex, sensitive and potentially traumatising discussions.[39] |
|---|---|---|

| B9 | Higher costs associated with readmissions | A number of studies show that readmission rates are higher for patients that do not use professional interpreters in the emergency department. Lindholm et al (2012) show higher readmission rates for patients without interpretation at both admission and discharge (24.3%) compared to LEP patients that had professional interpretation at both admission and |
|---|---|---|

[35] Grover, A., Deakyne, S., Bajaj, L., Roosevelt G. (2012). 'Comparison of throughput times for limited English proficiency patient visits in the emergency department between different interpreter modalities', 14(4) *Journal of Immigrant and Minority Health*, 602.

[36] Jaeger, F., Pellaud, N., Laville, B and Klauser, P. (2019). 'The migration-related language barrier and professional interpreter use in primary health care in Switzerland', 19 *BMC Health Service Research* 429, cited by Migrant & Refugee Health Partnership. (2020), 'Interpreter Engagement in General Practice in Australia', https://culturaldiversityhealth.org.au/wp-content/uploads/2020/06/Interpreter-Engagement-in-General-Practice-in-Australia.pdf

[37] Abbato, S., Greer, R., Ryan, J., Vayne-Bossert, P and Good, P. (2018). 'The Impact of Provision of Professional Language Interpretation on Length of Stay and Readmission Rates in an Acute Care Hospital Setting', 21 *Journal of Immigrant and Minority Health* 965.

[38] Bird, S. (2010). 'Failure to use an interpreter'. Australian Family Physician, 39(4), 241-242. PMID: 20372686.

[39] Okyayuz, M., Herrmann, P and Dorrity, C. (2014). 'Migration – Global processes caught in national answers'. Books on Demand, cited by FECCA. (2016). 'Australia's Growing Linguistic Diversity: An opportunity for a strategic approach to language services policy and practice.'

discharge (14.9%).[40] Higher readmission rates are associated with a range of costs for individuals (poor health outcomes), hospitals (additional resource use) and broader society (reduced labour productivity).

Note: # refers to the cost item in the framework figure.

### 4.1.4    Legal settings (AAT, FCFCOA, Federal Court, ACT Courts)

Sub-optimal interpreting can potentially lead to erroneous judgements, resulting in additional hearings and appeals processes, a longer period in detention for individuals, and erode confidence in legal institutions (Table 4.4).

Table 4.4: Description of costs from sub-optimal interpreting, legal settings

| # | Cost | Description |
|---|------|-------------|
| C1 | Time cost of delays, and appeals processes | Low-quality interpreting or last-minute cancellations by interpreters can result in hearing adjournments or further appeals on the basis of low-quality interpreting. Given that these additional court hearings need to be scheduled, individuals face delays in getting a final judgment. Some individuals may be held in detention and have their freedom limited during this time. For others in the community the waiting process can still represent a source of additional stress and anxiety. |
| C2 | Increased distress and uncertainty for individuals | According to the literature, lack of professionalism and inadequate interpretation, competence, training and preparation by an interpreter can undermine a lawyer's best efforts to advocate for their client, create suspicion of interpreters, undermine witness credibility and impede a judge or jury's evaluation of the evidence, resulting in significant confusion and uncertainty for parties involved.[41,42] |
| | | Anecdotal evidence from adverse case outcomes suggests that people with low English proficiency who experience poor-quality interpreting in court settings can experience significant feelings of anxiety and distress, confusion, frustration and disempowerment. |
| C4 | Adjourned and delayed hearings | According to FECCA (2016), gaps in language services can result in an increase in the postponement of court proceedings and use of unqualified interpreters.[43] Consultation with stakeholders indicates that adjournments are likely to reflect instances where (1) an interpreter has cancelled last minute and a replacement cannot be found, (2) where an inappropriate interpreter has been provided (e.g., wrong language or dialect) and (3) where poor interpreting has been identified as requiring intervention. Adjourned hearings result in process inefficiencies and costs for all parties involved, including the individuals, the legal representation and court staff. |
| C5 | Remitted cases and appeals | As demonstrated in Hale's 2011 study, inadequate or poor-quality interpreting can provide grounds for appeal, particularly in migration and protection cases appealed from the AAT to the Federal Court, with high stakes for such applicants. The study suggests that 121 appeals from 2006 to 2008 were on the basis of interpreting, representing 3% of hearings over |

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[40] Lindholm, M., Hargraves, J., Ferguson, W. and Reed G. (2012). 'Professional Language Interpretation and Inpatient Length of Stay and Readmission Rates.' *Journal of General Internal Medicine* 27 (10): 1294-1299

[41] Ibid

[42] Grabau, C. and Gibbons, L. (1996). 'Protecting the Rights of Linguistic Minorities: Challenges to Court Interpretation', *New England Law Review*, 227, cited by FECCA. (2016). 'Australia's Growing Linguistic Diversity: An opportunity for a strategic approach to language services policy and practice'.

[43] FECCA. (2016). 'Australia's Growing Linguistic Diversity: An opportunity for a strategic approach to language services policy and practice'.

| | | that period. This is broadly consistent with findings from the consultations, with stakeholders estimating that 1% of appeals would relate to issues with interpreter quality.

Remitted cases and appeals result in higher costs for the courts in conducting the hearings. |
|---|---|---|
| C7 | **Hidden wrong outcomes** | While there are some instances where sub-optimal interpreting is identified as having had an adverse impact on the case outcome or determination, the literature and stakeholders note that there is significant potential for many such instances to occur and go undetected. This is as courts and judges have relatively limited ability to identify inaccuracies in interpreting where they do not understand the language being translated. These potential miscarriages of justice can erode confidence in legal institutions. |

Note: # refers to the cost item in the framework figure.

### 4.1.5 HSP – Department of Home Affairs

Interpreters are most commonly used for health visits, interactions with government services and long-term accommodation (leasing) arrangements. Sub-optimal access to interpreters can lead to reduced engagement in primary health care and poor health outcomes. Humanitarian migrants are particularly vulnerable given they tend to have a variety of different physical and mental health needs shaped by experiences in their country of origin and may have more difficulty navigating the healthcare system in Australia due to low English proficiency compared to other visa holders (Table 4.5).

Table 4.5: Description of costs from sub-optimal interpreting, HSP

| # | Cost | Description |
|---|---|---|
| D1 | **Cost of physical harm and poor health** | Reduced availability of interpreters for primary care settings can decrease humanitarian migrants' engagement with primary care services.[44] Further, low-quality interpreting can also lead to poor experience and reduced trust in health care providers and in the broader health system. This could result in worse management of chronic diseases, and can increase preventable hospital costs.

One study of patients attending a refugee health service found that that 3.4% of patients reported adverse outcomes which were linked to inadequate interpreting provision. The majority of cases resulted in inadequate informed consent, resulting in physical and or psychological harm and delays in investigation and diagnosis.[45] |
| D2 | **Delayed diagnosis resulting in potential mental health concerns** | The lack of access to interpreters can result in delayed diagnosis for humanitarian migrants. One study noted instances where a patient had two presentations to health services with symptoms, and a neighbour was used as the interpreter. This resulted in the symptoms being dismissed as "non-specific" and was not further investigated. Delayed diagnosis may result in increased mental health concerns for individuals.[46] |

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[44] Migrant & Refugee Health Partnership. (2020), 'Interpreter Engagement in General Practice in Australia', https://culturaldiversityhealth.org.au/wp-content/uploads/2020/06/Interpreter-Engagement-in-General-Practice-in-Australia.pdf
[45] Rowse, J., Anderson, K., Phillips, C and Chan. B. (2016). 'Critical case analysis of adverse events associated with failure to use interpreters for non-English speaking patients'. The Australian National University. http://hdl.handle.net/1885/267397
[46] Ibid.

| D3 | Cost of being unable to access interpreters when required | Humanitarian migrants need to work with interpreters in a range of interactions. In addition to health interactions, other common situations where interpreters are required include speaking to the government, speaking about housing, speaking at place of work/study and speaking to a teacher.[47] |
| --- | --- | --- |
| | | However, not being able to readily access interpreters when required is likely to result in increased uncertainty for individuals, and could result in the interaction needing to be rebooked or relying on either informal interpreters or no interpreters. |

Note: # refers to the cost item in the framework figure.

### 4.1.6    Services Australia

Sub-optimal access to interpreters in the Services Australia context could potentially result in payment delays, errors in advice or applications, and reduced access to services (Table 4.6).

Table 4.6: Description of costs from sub-optimal interpreting, Services Australia

| # | Cost | Description |
| --- | --- | --- |
| E1 | Delayed payments and potential debts | Consultation with Services Australia suggests that challenges in engaging an interpreter may result in delays to appointments and consequently delays to payments. This could result in debts where the delays are significant. Notwithstanding this, the Agency assessed that such instances are rare, with staff acting to minimise any financial consequences to service users from such occurrences. |
| E2 | Incorrect payments and supports | In addition to delays in payments, sub-optimal access to interpreters could result in incorrect payments or supports provided to individuals. |
| E3 | Cancellations and call disconnections | Consultation stakeholders report that there are increased incidents of interpreters terminating calls early. This could create inefficiencies if the issue is not resolved, and new calls with another interpreter is required. |
| E4 | Repeat calls or visits | A lack of high quality interpreters could mean that the issue is not readily solved. This would create inefficiencies as the individual will need to call or visit again. |
| E5 | Increase in customer aggression | Where sub-optimal access to interpreters results in delayed payments or repeat visits, individuals could experience increased frustration and dissatisfaction. This could potentially manifest in increased customer aggression. |

Note: # refers to the cost item in the framework figure.

## 4.2    The estimated per unit economic and social costs of sub-optimal interpreting

Combining evidence from the literature and consultations with *assumptions* where there are gaps in the research, Deloitte Access Economics develops per unit economic and social costs for sub-optimal interpreting across the service delivery case studies. The costs of low-quality interpreting are generally smaller per instance than if the person did not receive an interpreter, but may still be significant, particularly in higher risk settings.

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[47] Department of Social Services. (2022). 'Building a New Life in Australia: The Longitudinal Study of Humanitarian Migrants'.

Details on the evidence sources and key assumptions used in estimating the per unit cost are given in Appendix E.

Note that the per unit costs are not directly comparable across service delivery areas due to the different units being used. For instance, whereas an interpreter assignment for Services Australia is 20 minutes, a hospital admission can involve multiple interpreter sessions.

### 4.2.1 Aged care

Each person with low proficiency in English in residential aged care and receiving low-quality interpreting is associated with an economic and social cost of $4,150 per annum. For each person with low proficiency in English in residential aged care and not accessing interpreting, the cost is higher at $8,000 per annum. The top costs result from reduced care planning – which results in both lower quality of life for individuals, and higher costs of delivery for aged care service providers (Table 4.7).

Note that the costs associated with reduced access to aged care services (A2 in Figure ii) are not captured in the total cost as these costs represent a potential transfer, rather than a net *cost*. While individuals and their carers are worse off, this is a potential short term cost saving for the government. While there are likely to be longer term costs for the government (i.e. residents requiring more intensive and costly aged care in the future), they are difficult to quantify.

Details on the evidence sources and key assumptions used in estimating the per unit cost are given in Appendix E.1.

Table 4.7: Estimated per unit economic and social cost of sub-optimal interpreting services, aged care

| # | Description | Strength of evidence | Low-quality interpreting | Unmet demand for interpreting |
|---|---|---|---|---|
| | Unit | Per permanent residential care resident | | |
| A11 | Cost per annum due to reduced QOL Medium | | $1,170 | $2,300 |
| A55 | Higher costs of delivery per annum due to less person-centred care | Medium | $2,900 | $5,800 |
| A44 | Costs associated with inefficient use of interpreters | Low | $80 | |
| | **Total** | **Medium** | **$4,150** | **$8,000** |
| A22 | *Costs associated with reduced access to aged care services* | *Low* | *$900* | *$1,800* |

Source: Deloitte Access Economics (2023). Note: Rounding of values may create discrepancy between sum of per unit costs and total costs for the case study. # refers to the cost item in the framework figure.

### 4.2.2 Public hospital and health services (Qld)

For low-quality interpreting, the highest quantifiable costs relate to additional costs due to increased length of hospitalisation and the inefficient use of interpreters. For those not accessing interpreting, the highest costs are from increased length of hospitalisation and malpractice issues relating to informed consent and/or adverse incidents (Table 4.8).

These estimated costs are likely to be conservative as the costs associated with poor health outcomes and reduced satisfaction for carers, family and relatives have not been quantified and are likely underreported.

Details on the evidence sources and key assumptions used in estimating the per unit cost are given in Appendix E.2.

Table 4.8: Estimated per unit economic and social cost of sub-optimal interpreting services, public hospitals and health services

| # | Description | Strength of evidence | Low-quality interpreting | Unmet demand for interpreting |
|---|---|---|---|---|
| | Unit | Dependent on category (Per hospital admission, ED presentation, non-admitted service events) | | |
| B4 | Additional costs due to higher throughput time | High | $60 | $75 |
| B4 | Additional costs due to increased hospitalisation length | High | $2,300 | $4,100 |
| B9 | Additional costs due to readmissions | High | $140 | $280 |
| B1 | Psychological stress for patients due to lack of informed consent | Medium | $20 | $48 |
| B7 | Costs to hospitals from informed consent cases | Low | $250 | $500 |
| B6 | Costs associated with inefficient use of interpreters | Medium | $800 | |
| B5 | Additional costs due to booking cancellations | Medium | $50 | |
| | Total | High | $3,620 | $5,010 |

Source: Deloitte Access Economics (2023). Note: Rounding of values may create discrepancy between sum of per unit costs and total costs for the case study. # refers to the cost item in the framework figure.

### 4.2.3      Legal settings

For each hearing by an individual with low English proficiency, receiving low-quality interpreting is associated with an economic and social cost of $1,430 per hearing in the AAT and $1,100 for hearings in migration settings in the FCFCOA and Federal Court.

The cost is $1,330 for AAT and FCFCOA for instances where individuals are unable to access interpreters. Given that there are restrictions in place such that hearings are unable to proceed without interpreters, these higher costs result from additional delays for a suitable interpreter to be booked. For AAT, the per unit costs of low-quality interpreting are higher compared to unmet demand as there are additional costs associated with appeals, remitted cases and adjournments.

These estimates are likely to be conservative as the costs are limited to cases where sub-optimal interpreting has been detected. Costs associated with hidden wrong outcomes (instances where the wrong court determination has been handed down) – have not been quantified. The per unit costs for the AAT and FCFCOA are given in Table 4.9 and Table 4.10 respectively. Due to insufficient data, per unit costs for ACT Courts have not been estimated.

Details on the evidence sources and key assumptions used in estimating the per unit costs for both the AAT and FCFCOA are given in Appendix E.3.

Table 4.9: Estimated per unit economic and social cost of sub-optimal interpreting services, AAT

| # | Description | Strength of evidence | Low-quality interpreting | Unmet demand for interpreting |
|---|---|---|---|---|
| | Unit | | Per hearing | |
| C3 | Additional costs of cancellations and organising bookings | Medium | $10 | $40 |
| C4 | Costs of adjournments and waiting for interpreter availability | Medium | $300 | $1,290 |
| C1 | Cost of appeals | Medium | $40 | |
| C5 | Cost of remitted cases | High | $10 | |
| C1 | Cost of additional time spent in court due to low-quality interpreting | Low | $900 | |
| C6 | Costs due to inefficient use of interpreters | Low | $170 | |
| | **Total** | **Medium** | **$1,430** | **$1,330** |

Source: Deloitte Access Economics (2023). Note: Rounding of values may create discrepancy between sum of per unit costs and total costs for the case study. # refers to the cost item in the framework figure.

Table 4.10: Estimated per unit economic and social cost of sub-optimal interpreting services, FCFCOA

| # | Description | Strength of evidence | Low-quality interpreting | Unmet demand for interpreting |
|---|---|---|---|---|
| | Unit | | Per hearing | |
| C3 | Additional costs of cancellations and organising bookings | Medium | $3 | $40 |
| C4 | Costs of adjournments and waiting for interpreter availability | Medium | $900 | $1,290 |
| C1 | Cost of additional time spent in court due to low-quality interpreting | Medium | $150 | |
| C6 | Costs due to inefficient use of interpreters | High | $50 | |
| | **Total** | **Medium** | **$1,100** | **$1,330** |

Source: Deloitte Access Economics (2023). Note: Rounding of values may create discrepancy between sum of per unit costs and total costs for the case study. # refers to the cost item in the framework figure.

### 4.2.4    HSP

For each humanitarian entrant in the HSP with low English proficiency, each instance of low-quality interpreting is associated with an economic and social cost of $1,630 per annum. For each person not accessing interpreters, this increases to $3,600 per annum. The key costs relate to health settings – with sub-optimal interpreters resulting in less engagement with the primary health care settings and resulting in higher preventable health costs.

Details on the evidence sources and key assumptions used in estimating the per unit cost are given in Appendix E.4.

Table 4.11: Per unit economic and social cost of sub-optimal interpreting services, HSP

| # | Description | Strength of evidence | Low-quality interpreting | Unmet demand for interpreting |
|---|---|---|---|---|
| | Unit | Per humanitarian migrant (current and former) | | |
| D1 | Cost of physical harm and poor health | Medium | $1,450 | $2,800 |
| D2 | Cost of delayed diagnosis resulting in potential mental health concerns | Medium | $180 | $190 |
| D3 | Value of not being able to access interpreter when required | Low | n/a | $610 |
| | **Total** | **Medium** | **$1,630** | **$3,600** |

Source: Deloitte Access Economics (2023). Note: Rounding of values may create discrepancy between sum of per unit costs and total costs for the case study. # refers to the cost item in the framework figure.

### 4.2.5 Services Australia

For each interpreter assignment with Services Australia – which typically lasts 20 minutes on average – optimal interpreter outcomes can result in an estimated economic and social cost of $25 for each instance of low-quality interpreting, and $39 for each instance where interpreters have not been accessed (Table 4.12).[48]

The costs are likely to be conservative as they only relate to costs related to time delays from miscommunication and an increased risk of delayed payments. There was insufficient evidence to quantify other potential costs, including incorrect payments and supports and increase in customer aggression.

Details on the evidence sources and key assumptions used in estimating the per unit cost are given in Appendix E.5.

Table 4.12: Per unit economic and social cost of sub-optimal interpreting services, Services Australia

| # | Description | Strength of evidence | Low-quality interpreting | Unmet demand for interpreting |
|---|---|---|---|---|
| | Unit | Per interpreting assignment | | |
| F3 | Cost of miscommunication to the individual | Low | $6 | $13 |
| F3 | Cost of miscommunication to the government | Low | $12 | $24 |
| E1 | Cost of delayed payments and potential debts | Low | $6 | $2 |
| | **Total** | **Low** | **$25** | **$39** |

Source: Deloitte Access Economics (2023). Note: Rounding of values may create discrepancy between sum of per unit costs and total costs for the case study. # refers to the cost item in the framework figure.

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[48] There was insufficient evidence to estimate costs of sub-optimal interpreter use for ACT Courts.

# 5 Current costs of sub-optimal interpreting

This chapter estimates the total current economic and social costs associated with the sub-optimal interpreting drawing on the per unit costs across individuals, government and society (Chapter 4) and the instances of sub-optimal service provision (Chapter 3) drawing on a range of sources. The report has limited estimates to outcomes and case studies where there is relatively stronger and more complete evidence, rather than provide a cost for interpreting across all service delivery areas, with further details on the limitations given in Section 5.7.

## 5.1 Aged care

Australian Government GEN Aged Care data suggests that there are nearly 16,000 residents in permanent residential aged care with low English proficiency. The data provided by LSPs suggest that there are potentially to be over 700 instances of unfilled demand, and nearly 1,300 instances where low-quality interpreting is provided.[49]

The economic and social cost of not being able to access interpreting services is estimated at $8,000 per instance, while the cost of low-quality interpreting is $4,150 per instance of *interpreting provided.* When combined with the per unit costs of not being able to access high quality interpreting services, it is estimated that sub-optimal interpreting in aged care results in a lower bound economic and social cost of $10.8 million per annum. This includes $5.5 million in costs associated with low-quality interpreting, and $5.4 million associated with unfilled interpreting. These elements are included in the lower bound given there is relatively stronger evidence to support its quantification.

When considering latent demand, the costs to the economy are likely to be significantly greater, at $82.7 million. However, these figures have not been included in the lower bound due to a high degree of uncertainty.

Individuals bear the cost of reduced quality of life resulting from less patient centred care planning. The higher aged care delivery costs associated with less patient centred care are borne by a range of stakeholders. While service providers will directly face higher delivery costs, these costs could potentially be passed on in the form of higher funding rates by government and higher taxes. The summary results are presented in Table 5.1.

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[49] Assuming conservatively that each resident needs to access interpreters at least once a year to support with care planning, admissions or exit.

Table 5.1: Estimated social and economic costs of sub-optimal interpreting in aged care, 2023

|  | Stakeholder | Low-quality | Unfilled | Latent |
|---|---|---|---|---|
| **Instances (persons in permanent residential care)** |  | 1,300 | 700 | 10,300 |
| **Costs per instance ($)** |  | 4,150 | 8,000 | 8,000 |
| Cost per annum due to reduced quality of life ($M) | Individuals | 1.5 | 1.5 | 23.5 |
| Higher costs of delivery per annum due to less person-centred care ($M) | Society | 3.8 | 3.9 | 59.2 |
| Costs associated with inefficient use of interpreters ($M) | Government | 0.1 | n/a | n/a |
| **Total costs per annum ($M)** |  | 5.5 | 5.4 | 82.7 |
| *Costs associated with reduced access to aged care services ($M)* | Individuals | 1.2 | 1.2 | 18.8 |

Source: Deloitte Access Economics (2023). Instances and costs per instance are multiplied to estimate total costs per annum. The figures may not equal due to rounding.

## 5.2 Legal (AAT, FCFCOA and Federal Court)

In a legal setting, there are over 10,000 hearings involving an individual who requires interpreting per annum in the AAT, FCFCOA and Federal Court. While the majority of hearings relate to migration proceedings, this also includes other practice areas in FCFCOA and Federal Court such as family law. Although all hearings are assumed to eventually receive an interpreter resulting in minimal latent demand, an interpreter may not be readily available when first requested, creating unfilled demand.

The lower bound economic and social costs associated with the sub-optimal delivery of interpreting services in the AAT are estimated at $5.3 million per annum (Table 5.2).

- Low-quality interpreting results in a cost of $4.8 million per annum
- Unfilled demand for interpreting services results in a cost of $0.5 million per annum.

The key driver of these costs is the cost to applicants of waiting for an interpreter to become available, though inefficiency in interpreting and longer hearing times also play a role.

Table 5.2: Estimated total social and economic costs of sub-optimal interpreting in the AAT, 2023

| | Stakeholder | Low-quality | Unfilled | Latent |
|---|---|---|---|---|
| Instances (hearings) | | 3,400 | 400 | Minimal |
| Costs per instance ($) | | 1,430 | 1,330 | - |
| Additional costs of cancellations and organising bookings ($M) | Government | 0.03 | 0.01 | - |
| Costs of adjournments and waiting for interpreter availability ($M) | Individuals & Government | 0.95 | 0.47 | - |
| Costs of appeals ($M) | Individuals & Government | 0.14 | n/a | - |
| Costs of remitted cases ($M) | Individuals & Government | 0.02 | n/a | - |
| Cost of additional time spent in court due to low-quality interpreting ($M) | Individuals | 3.06 | n/a | - |
| Costs due to inefficient use of interpreters ($M) | Government | 0.58 | n/a | - |
| Total costs per annum ($M) | | 4.8 | 0.5 | Minimal |

Source: Deloitte Access Economics (2023). Instances and costs per instance are multiplied to estimate total costs per annum. The figures may not equal due to rounding.

In the FCFCOA and Federal Court, the lower bound economic and social costs of sub-optimal interpreting are estimated at $3.3 million per annum (Table 5.3). This is predominantly driven by the costs associated with low-quality interpreting ($2.9 million). As with the AAT, the key driver of these costs is adjournments and waiting for interpreters to be available.

Table 5.3: Estimated total social and economic costs of sub-optimal interpreting in the FCFCOA and Federal Court, 2023

| | Stakeholder | Low-quality | Unfilled | Latent |
|---|---|---|---|---|
| Instances (hearings) | | 2,600 | 300 | Minimal |
| Costs per instance ($) | | 1,100 | 1,330 | - |
| Additional costs of cancellations and organising bookings ($M) | Government | 0.01 | 0.01 | - |
| Costs of adjournments and waiting for interpreter availability ($M) | Individuals & Government | 2.32 | 0.41 | - |
| Cost of additional time spent in court due to low-quality interpreting ($M) | Individuals | 0.39 | n/a | - |
| Costs due to inefficient use of interpreters ($M) | Government | 0.14 | n/a | - |
| Total costs per annum ($M) | | 2.9 | 0.4 | Minimal |

Source: Deloitte Access Economics (2023). Instances and costs per instance are multiplied to estimate total costs per annum. The figures may not equal due to rounding.

Across the legal settings that have been considered, sub-optimal interpreting is associated with an economic and social cost of $8.5 million per annum. Due to limited data availability, the costs for ACT Courts could not be quantified.

## 5.3 Humanitarian Settlement Program

Based on the annual humanitarian migrant intake, and the typical rate of English language acquisition, it is estimated that there are likely to be nearly 27,000 humanitarian migrants with low English proficiency at any point in time. They require interpreting services to support a range of interactions in health, housing and education.

It is estimated that for each humanitarian migrant, being unable to access interpreters is associated with an economic and social cost of $3,600 per instance, while accessing low-quality interpreting is associated with an economic and social cost of $1,630 per instance an interpreter is used (Table 5.4).

Overall, the lower bound costs to the economy of sub-optimal interpreting under the humanitarian settlement program are estimated to be $12.3 million per annum. The largest costs of sub-optimal interpreting are incurred by individuals from poor health outcomes and being unable to access interpreters when required. When considering latent demand, the costs to the economy and society are likely to be higher at $40.6 million per annum.

Table 5.4: Estimated total social and economic costs of sub-optimal interpreting in the HSP, 2023

|  | Stakeholder | Low-quality | Unfilled | Latent |
|---|---|---|---|---|
| **Instances (per person)** |  | 4,300 | 1,500 | 7,900 |
| **Costs per instance ($)** |  | 1,630 | 3,600 | 3,600 |
| Cost of physical harm, and poor health outcomes ($M) | Society | 6.24 | 4.13 | 21.91 |
| Cost of delayed diagnosis ($M) | Society | 0.79 | 0.29 | 1.53 |
| Cost of not accessing an interpreter when needed ($M) | Individuals | n/a | 0.90 | 4.80 |
| **Total costs per annum ($M)** |  | 7.0 | 5.3 | 28.2 |

Source: Deloitte Access Economics (2023). Instances and costs per instance are multiplied to estimate total costs per annum. The figures may not equal due to rounding.

## 5.4 Services Australia

Based on the LSP data request, approximately 448,000 occasions of interpreting are provided by Services Australia per annum, with 27,000 instances of unfilled demand. There was insufficient data to estimate the extent of latent demand for interpreting services when accessing Services Australia.

Given limited evidence on the types of outcomes that could result from sub-optimal interpreting in the Services Australia context, Deloitte Access Economics has conservatively estimated that each instance of low-quality interpreting is associated with a cost of $25, while each instance of unfilled demand is associated with a cost of $39 (see Table 4.6 for further details). This considers higher costs due to miscommunication resulting in longer interactions, but does not consider potential costs resulting from reduced access to services or delayed payments.

As a lower bound, the annual social and economic cost associated with sub-optimal interpreting in Services Australia is estimated at approximately $4.1 million (Table 5.5). Low-quality interpreting costs the economy and society $3.0 million per year, while not being able to access an interpreter generates $1.1 million in costs across Australia.

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Table 5.5: Estimated total social and economic costs of sub-optimal interpreting for Services Australia, 2023

| | Stakeholder | Low-quality | Unfilled | Latent |
|---|---|---|---|---|
| **Instances (interpreter assignments)** | | **119,300** | **27,100** | **Unknown** |
| **Costs per instance ($)** | | 25 | 39 | - |
| Cost of miscommunication to the individual ($M) | Individuals | 0.76 | 0.34 | - |
| Cost of miscommunication to the government ($M) | Government | 1.47 | 0.65 | - |
| Cost of delayed payments | Individuals | 0.76 | 0.07 | - |
| Total costs per annum ($M) | | 3.0 | 1.1 | Unknown |

Source: Deloitte Access Economics (2023)

## 5.5    Public hospitals and health services (Queensland)

Based on the hospital admission and population data, it is estimated there are more than 17,000 hospital admissions in Queensland each year by patients with low English proficiency. Based on studies of interpreter engagement and LSP data, this results in an estimated 12,000 instances where interpreters are provided, and 1,600 instances of unfilled demand (see Sections 3.3 and 3.4 for further details). In estimating hospital admissions, the modelling has not been adjusted to account for the age profile of people with low English proficiency, and their likelihood of hospital admission relative to the broader population.

The estimated annual cost of a patient with low English proficiency not being able to access an interpreter is $5,010 per instance, while the cost of low-quality interpreting is lower, at approximately $3,620 per instance (see Section 4.2.2 for further details on how the costs per instance are derived).

As a lower bound, the total economic and social costs to the Queensland economy of sub-optimal interpreting in hospitals is estimated to be $24.4 million per annum (Table 5.6). This includes:

- An estimated cost of $16.3 million associated with low-quality interpreting costs
- An estimated cost of $8.0 million associated with unfilled demand.

The largest contributor to costs across all categories of demand is the likely ensuing increased length of hospitalisation. When incorporating latent demand, the costs to the Queensland economy from sub-optimal interpreting could be as high as an estimated $44.5 million per annum.

Table 5.6: Estimated total social and economic costs of sub-optimal interpreting in Queensland Public Hospital and Health Services, 2023

| | Stakeholder | Low-quality | Unfilled | Latent |
|---|---|---|---|---|
| Instances of hospital admissions | | 3,000 | 1,600 | 4,000 |
| Instances of emergency department presentations | | 4,300 | 2,300 | 5,800 |
| Instances of non-admitted service events | | 26,500 | 14,000 | 35,200 |
| Costs per instance ($) | | 3,620 | 5,010 | 5,010 |
| Costs due to higher throughput time ($M)[E] | Government | 0.28 | 0.17 | 0.43 |
| Costs due to increased length of hospitalisation ($M)[H] | Government | 6.86 | 6.54 | 16.41 |
| Additional cost of readmissions ($M)[H] | Society | 0.42 | 0.44 | 1.11 |
| Psychological stress for patients from a lack of informed consent ($M)[H] | Individuals | 0.07 | 0.08 | 0.19 |
| Costs to hospitals of informed consent cases ($M)[H] | Government | 0.76 | 0.80 | 2.01 |
| Costs due to inefficient use of interpreters ($M)[EH] | Government | 6.16 | n/a | n/a |
| Additional costs due to booking cancellations ($M)[EHN] | Government | 1.81 | n/a | n/a |
| Total costs per annum ($M) | | 16.3 | 8.0 | 20.2 |

Source: Deloitte Access Economics (2023). [E] Number of instances for emergency department presentations. [H] Number of instances for hospital admissions. [N] Number of instances for non-admitted hospital service events. Instances and costs per instance are multiplied to estimate total costs per annum. The figures may not equal due to rounding.

## 5.6 Current economic and social costs of Australian Government procurement

Based on the service delivery case studies with relatively stronger evidence underpinning the analysis,[50] it is estimated that the current provision of interpreting by the Australian Government and Queensland public hospitals and health services leads to an estimated economic and social cost of $60 million per annum (Table 5.7). When considering latent demand for interpreting, the economic and social costs associated with the case studies increase to $191 million per annum.

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[50] This includes aged care, legal settings (AAT, FCAFA and Federal Court) and HSP. Services Australia has been excluded due to lower confidence in the estimates.

Table 5.7: Estimated economic and social cost of current sub-optimal interpreting across case studies ($ million), 2023

| Service delivery | (1) | (2) | (1) + (2) | (3) | (1) + (2) + (3) |
|---|---|---|---|---|---|
| | Low-quality | Unfilled | Lower bound | Latent | Upper bound |
| Aged Care (M) | 5.5 | 5.4 | 10.8 | 82.7 | 93.5 |
| Legal settings (M) | 7.6 | 0.9 | 8.5 | - | 8.5 |
| HSP (M) | 7.0 | 5.3 | 12.3 | 28.2 | 40.6 |
| Services Australia (L) | 3.0 | 1.1 | 4.1 | - | 4.1 |
| Aus Gov case studies | 23 | 13 | 36 | 111 | 147 |
| Public hospitals and health services (Qld) (H) | 16.3 | 8.0 | 24.4 | 20.2 | 44.5 |
| All case studies | 39 | 21 | 60 | 131 | 191 |

Source: Deloitte Access Economics (2023). H = relatively high degree of confidence in estimates; M = medium; L= low.

Beyond the case studies, it is possible to extrapolate the economic and social costs for sub-optimal interpreting to select service areas.

For **public hospital and health services in the rest of Australia**, the modelling assumes that the per unit costs and prevalence of sub-optimal interpreter use in Queensland are similar in other jurisdictions. The cost for the rest of Australia is estimated by accounting for the population of low English proficiency residents outside of Queensland, with 11% of people with low English proficiency living in Queensland.

**Interpreters are used by the Department of Health and Aged Care and Department of Home Affairs outside the case studies**. Interpreter use by the aged care sector is estimated to account for $1 million (27%) of Department of Health and Aged Care total procurement. Interpreter use through the HSP program captures 52% of the Department of Home Affairs' procurement of interpreters. By assuming that uncaptured interpreter use by these two Departments has similar risk and cost profiles to the case studies, the economic and social costs can be extrapolated across the two Departments to cover their total expenditure on interpreters.

While a proportion of Australian Government interpreting is incurred by other Departments delivery areas (representing 19% of total interpreter procurement), there is a large level of uncertainty over the relative risks associated with sub-optimal interpreting, and these costs have not been quantified in this study.[51]

The extrapolated potential economic and social costs associated with sub-optimal interpreting by relevant Australian Government agencies and across public hospital and health services are given in Table 5.8. The current economic and social costs can range from $326 million (lower bound) to $892 million (upper bound) per annum.

[51] The top Australian Government departments not captured by interpreter procurement from 2018 to 2023 include: ATO ($39 million), Department of Defence ($12 million) and Australian Federal Police ($6 million).

Table 5.8: Estimated economic and social cost of current sub-optimal interpreting ($ million), 2023

| Service delivery | (1) Low-quality | (2) Unfilled | (1) +(2) Lower bound | (3) Latent | (1) + (2) + (3) Upper bound |
|---|---|---|---|---|---|
| **All case studies** | **39** | **21** | **60** | **131** | **191** |
| Uncaptured relevant Aus Gov Agencies* | 21.1 | 19.4 | 40.4 | 248.7 | 289.1 |
| Public hospital and health services (ROA) | 151.1 | 74.2 | 225.3 | 186.3 | 411.7 |
| **Extrapolated total^** | **212** | **114** | **326** | **566** | **892** |

Source: Deloitte Access Economics (2023). *Relevant Australian Government Agencies refer to those responsible for delivering the case studies: Department of Health and Aged Care, Department of Home Affairs, AAT, FCFCOA and Federal Court, and Services Australia. ^Extrapolated total refers to the case studies + relevant Aus gov agencies + public hospital and health services (ROA).

Based on the mapping between different outcomes and stakeholders, the estimated economic and social costs (extrapolated total) are likely to be distributed across the community. It is estimated that 7% of economic and social costs are likely to be borne by individuals, 75% by government, and the remaining 18% by broader society, including private service providers, families and communities (Chart 5.1). The high proportion of total costs for the government result from public hospital and health services, where over 90% of economic and social costs in the setting are borne by the government.

Chart 5.1: Estimated distribution of economic and social costs by stakeholder (lower bound extrapolated total, $million pa)



18%, $58.2    7%, $23.7

75%, $244.1

Individuals    Government    Society

Source: Deloitte Access Economics (2023). This includes the costs to the Australian Government case studies, uncaptured relevant Australian agencies, and Public Hospital and Health Services (Aus).

## 5.7    Limitations, caveats and sensitivity testing

Deloitte Access Economics has undertaken an *exploratory* exercise to quantify the economic and social costs associated with sub-optimal interpreting based on the best available evidence. This has meant that the evidence underpinning the modelling has been collated from a wide range of sources, with varying levels of quality. This ranges from peer reviewed literature and public data, through to anecdotal evidence from consultations.

Given there is limited centralised data collection on interpreter use across the service delivery areas, with data differences across the case studies, there are instances where costs for service delivery areas could not be quantified (e.g. ACT Courts), or the types of outcomes that could be quantified are limited (e.g. Services Australia).

There are sometimes discrepancies in values across data sources. For instance, consultation information at times did not match information from other data sources, including government procurement data, the sector survey or the broader literature. Where possible, this study uses the average value across multiple studies or sources.

The downstream effects of sub-optimal interpreting have not been considered in this study. Consequently, the captured economic and social costs are likely to be conservative.

It is difficult to quantify instances of sub-optimal interpreting as it is not directly observed. For instance, while total potential demand is often proxied by individuals with low English proficiency, this may understate total demand for interpreters. For complex settings, even individuals with good English proficiency would benefit from interpreting services. The associated costs have not been captured in this study.

Similarly, instances of low-quality interpreting are difficult to identify. Consequently, this analysis proxies for quality based on two *quantifiable* factors typically associated with quality – NAATI certification level and mode of interpreting. Other factors, such as qualification level have not been considered due to limited data.

These different factors have complicated efforts to accurately model the economic and social costs associated with sub-optimal interpreting services. Consequently, the report has limited estimates to outcomes and case studies where there is relatively stronger and more complete evidence, rather than providing a cost for interpreting across all service delivery areas.

However, even then, there remain gaps in the data, and the modelling has had to rely on a range of assumptions. Key assumptions include:

- The base rate of poor interpreting occurring across the service delivery areas (see Table 3.5)
- The impact of poor interpreting, relative to not accessing interpreters, in resulting in the range of poor outcomes. The full list of key assumptions is given in Appendix E.

Given uncertainty over the modelling parameters and estimates, low and high sensitivity scenarios are calculated to support the central modelling given in the previous sections. These scenarios change key parameters underpinning the modelling, particularly where there was a high level of uncertainty in the evidence, or where a parameter is purely assumptions driven. The relevant parameters and their values across the sensitivities can be found in Appendix E.7. For greater context some basic parameter adjustments are as follows:

- Parameters set at 50% were adjusted by 20% for each sensitivity (i.e. 30% and 70%)
- Parameters set at 20% were adjusted by 10% for each sensitivity (i.e. 10% and 30%)
- Timeframes for specific events were assumed to decrease or increase by one week.

The annual economic and social costs under the low sensitivity scenario are summarised in Table 5.9, while the results under the high sensitivity scenario are summarised in Table 5.10.

Table 5.9: Estimated economic and social cost of sub-optimal interpreting under a low sensitivity scenario ($ million), 2023

| Low sensitivity | Low quality | Unfilled demand | Lower bound | Latent | Upper bound |
|---|---|---|---|---|---|
| Aged Care (M) | 1.0 | 3.1 | 4.0 | 47.1 | 51.1 |
| Legal settings (M) | 4.2 | 0.7 | 4.8 | - | 4.8 |
| HSP (M) | 1.3 | 3.6 | 4.9 | 19.2 | 24.2 |
| Services Australia (L) | 0.9 | 1.0 | 1.9 | - | 1.9 |
| **Aus Gov case studies** | **7** | **8** | **16** | **66** | **82** |
| Public hospitals and health services (Qld) (H) | 9.5 | 6.9 | 16.3 | 17.2 | 33.6 |
| **Total case studies** | **17** | **15** | **32** | **84** | **116** |
| Uncaptured relevant Aus Gov Agencies* | 3.8 | 11.6 | 15.4 | 144.5 | 159.9 |
| Public hospitals and health services (ROA) | 87.6 | 63.4 | 151.0 | 159.2 | 310.2 |
| **Extrapolated total^** | **109** | **90** | **199** | **387** | **586** |

Source: Deloitte Access Economics (2023). H = relatively high degree of confidence in estimates; M = medium; L= low.
*Relevant Australian Government Agencies refer to those responsible for delivering the case studies: Department of Health and Aged Care, Department of Home Affairs, AAT, FCFCOA and Federal Court, and Services Australia and health services (ROA).
^Extrapolated total refers to the case studies + relevant Aus gov agencies + public hospital and health services (ROA).

**SUPPLY: Interpreter population**
=
Existing interpreter population.
−
Interpreters leaving the sector due to retirement or other reasons.
+
People joining the interpreter profession.
+
Additional hours worked by existing interpreter workforce.

**DEMAND: Low English proficiency population**
=
Existing low English proficiency population.
+
Net migration of people with low English proficiency.
−
Net change in people becoming more proficient in English.
−
People with low English proficiency passing away.
−
Reduced demand for interpreting due to technological solutions.*

Table 5.10: Estimated economic and social cost of sub-optimal interpreting under a high sensitivity scenario ($ million), 2023

| High sensitivity | Low quality | Unfilled demand | Lower bound | Latent | Upper bound |
|---|---|---|---|---|---|
| Aged Care (M) | 13.0 | 6.2 | 19.2 | 94.6 | 113.8 |
| Legal settings (M) | 12.6 | 1.1 | 13.7 | - | 13.7 |
| Services Australia (L) | 20.3 | 6.9 | 27.2 | 36.8 | 64.0 |
| HSP (M) | 6.1 | 1.1 | 7.3 | - | 7.3 |
| **Aus Gov case studies** | **52** | **15** | **67** | **131** | **199** |
| Public hospitals and health services (Qld) (H) | 25.1 | 8.4 | 33.5 | 21.0 | 54.5 |
| **Total case studies** | **77** | **24** | **101** | **152** | **253** |
| Uncaptured relevant Aus Gov Agencies* | 53.5 | 22.9 | 76.4 | 288.6 | 364.9 |
| Public hospitals and health services (ROA) | 233.8 | 77.2 | 311.0 | 193.8 | 504.8 |
| **Extrapolated total^** | **363** | **124** | **487** | **635** | **1,122** |

Source: Deloitte Access Economics (2023). H = relatively high degree of confidence in estimates; M = medium; L= low.
*Relevant Australian Government Agencies refer to those responsible for delivering the case studies: Department of Health and Aged Care, Department of Home Affairs, AAT, FCFCOA and Federal Court, and Services Australia. ^Extrapolated total refers to the case studies + relevant Aus gov agencies + public hospital and health services (ROA).

# 6 Factors affecting sector sustainability

This chapter outlines trends for the key drivers of demand and supply for the interpreting sector, and the potential implications for the sub-optimal delivery of interpreting services and the sustainability of the sector out to 2033.

## 6.1 Potential drivers of future sector sustainability

Future sector sustainability is driven by trends in:

- Supply for interpreters, as proxied by the size of the interpreter workforce
- Demand, as proxied by the population with low English proficiency.

The key drivers of supply and demand are outlined in Figure 6.1 below.

Figure 6.1: The delivery gap and key drivers of supply and demand

Source: Deloitte Access Economics. *These factors have not been quantified in this study.

## 6.2 Drivers of future demand

From 2023 to 2033, demand for interpreters is projected to increase by 18%. This section outlines potential future trends in the key drivers of demand for interpreting services in Australia.

**Existing population demand**

Existing population demand refers to the current number of people in Australia who have limited English proficiency and who would require interpreting services in the future. As of 2021, there were over 711,000 persons aged over 15 years old, who use a language other than English and speak English not well or not at all.

### Net migration of people with limited English proficiency

Net migration of people with limited English proficiency refers to the inflow minus the outflow of migrants with limited English proficiency. A positive net migration will increase demand, while a negative net migration will reduce demand.

The modelling assumes that over the next decade, there is growth in net migration inflows by the key visa holder groups with low English proficiency – (1) humanitarian migrants and (2) family migrants. This growth is informed by the Australian Government's announcement of an increase in the humanitarian program intake to 20,000 persons per annum.[52] Over the longer term, it is assumed that an increase in the humanitarian migrant intake to 27,000 visas per annum by 2033 is in line with Australian Government aspirations.[53]

### Net change in people becoming proficient in English

Over time, a proportion of the population with limited English proficiency will gradually become proficient in English and no longer require the support of interpreters. Based on historic trends, 1.9% of the population with low English proficiency is expected to become proficient in English per annum.[54]

There are also likely to be instances of people losing proficiency in English in older age and reverting to their native language. For instance, there has been an increase in demand for languages such as Greek and Italian in aged care residential homes. This has not been quantified in the modelling.

### People with limited English proficiency passing away

Lastly, 0.51% of the population with low English proficiency is assumed to pass away each year, which would represent a reduction in demand for interpreting services.[55]

### Reduced demand for interpreting due to technological solutions

Artificial intelligence (AI) was frequently raised in the sector survey as an emerging trend that may have an impact on the future interpreting sector. Improved technological solutions could increase self-agency for people with low English proficiency, and reduce their demand for interpreting. However, stakeholders also expressed concern over the use of AI in high-risk settings. This potential impact of technology on interpreting demand has not been quantified in the modelling.

## 6.3    Drivers of future supply

This section outlines potential future trends in the key drivers of supply for interpreting services in Australia.

### Existing interpreter workforce

The current supply of interpreters is estimated to be 10,340 interpreters. NAATI data shows there are approximately 2,500 certified or specialist interpreters and 5,200 certified provisional and recognised interpreters.[56] There is also estimated to be 2,600 interpreters without current NAATI certification, based on LSP data on the proportion of interpreting delivered by unaccredited interpreters.

### Additional hours worked by existing interpreter workforce

The majority of existing interpreters do not work full-time hours, with close to a third working less than 10 hours a week. If the existing workforce are willing and able to increase their hours worked, this would increase the effective supply of interpreters.

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[52] https://minister.homeaffairs.gov.au/AndrewGiles/Pages/increase-to-humanitarian-program-11082023.aspx

[53] Australian Government (Department of Home Affairs) (2023). 'Summary of the Responses to the Consultations on the 202-23 Humanitarian Program' <https://www.homeaffairs.gov.au/reports-and-pubs/files/summary-of-the-22-23-humanitarian-program-consultations.pdf>.

[54] This is estimated using Census data, looking at the population by their year of arrival in Australia and the proportion of the population with low English proficiency.

[55] This is based on the standardised death rate for Australia and may not reflect the age profile of people with low English proficiency.

[56] Certified and specialist interpreters are those interpreters holding the following certifications: certified specialist health interpreter; certified interpreter; specialist health interpreter knowledge test; specialist legal interpreter knowledge test; certified specialist legal interpreter; certified conference interpreter.

**People joining the interpreter profession**

NAATI certification data from 2021 and 2022 shows that approximately an additional
560 interpreters are certified per annum. This includes 83 newly certified and specialist interpreter
per year and 476 new certified provisional and recognised interpreters. However, these statistics
are based on the individuals completing the certification process, and do not distinguish between
existing workers upskilling, and new workers entering the profession.

The number and type of people joining the profession is likely to be a function of:

- the perceived career prospects, which affect the number and type of candidates pursuing the
  profession
- access to appropriate, high quality training in both VET and higher education, which support in
  developing interpreters with relevant skills.

**Interpreters leaving the sector**

Each year, a proportion of the existing workforce will leave the sector. Based on the sector survey,
33% of the respondent interpreters and translators report being somewhat or extremely likely to
leave the sector (Chart 6.1). Of those interpreters and translators who report being likely to leave
the sector, 80% report being likely to leave in the next two years.

Certified and specialist interpreters are more likely to report an intention to leave the sector
compared to interpreters without current NAATI certification, which could also affect the
composition of the workforce.

Chart 6.1: Reported likelihood to leave the sector by interpreters and translators
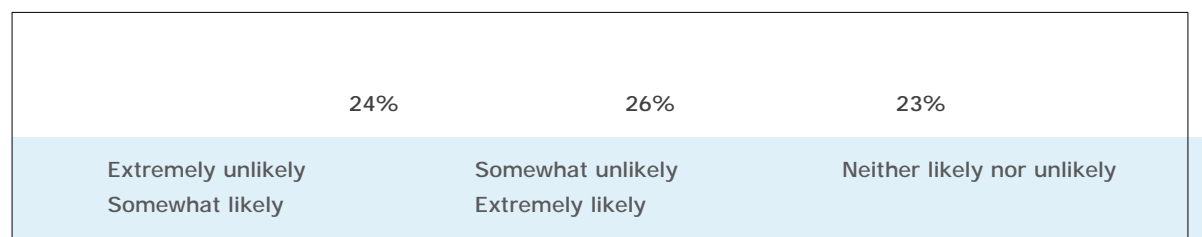
| 24% | 26% | 23% |
|-----|-----|-----|
| Extremely unlikely | Somewhat unlikely | Neither likely nor unlikely |
| Somewhat likely | Extremely likely | |

Source: Deloitte Access Economics, based on Department of Home Affairs Language Sector Sustainability Survey (2023). Note
that the shares may not sum to 100% due to rounding.

- **Retirement:** the occupation has traditionally relied on an older workforce. Based on the
  2021 Census, 20% of the existing workforce already above retirement age (65 and over).
  Retirement pressures are expected to increase over the next decade, with 43% of the existing
  workforce aged 55 and over, and expected to be aged 65 and over by 2033. Based on the
  sector survey, 6% of respondent interpreters report being likely to leave the sector due to
  retirement.[57]

- **Attrition:** Based on the sector survey, 27% of the sector report an intention to leave the
  sector due to non-retirement related reasons. The top stated reasons that contribute to
  interpreters and translators considering leaving the sector are (1) lack of job security, (2) low
  remuneration and (3) casualisation of employment (Chart 6.2).

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[57] Of the 33% of survey respondents that indicated an intention to leave the sector, 17% state retirement as a reason for leaving.

Chart 6.2: Top reasons why interpreters and translators are considering leaving the sector
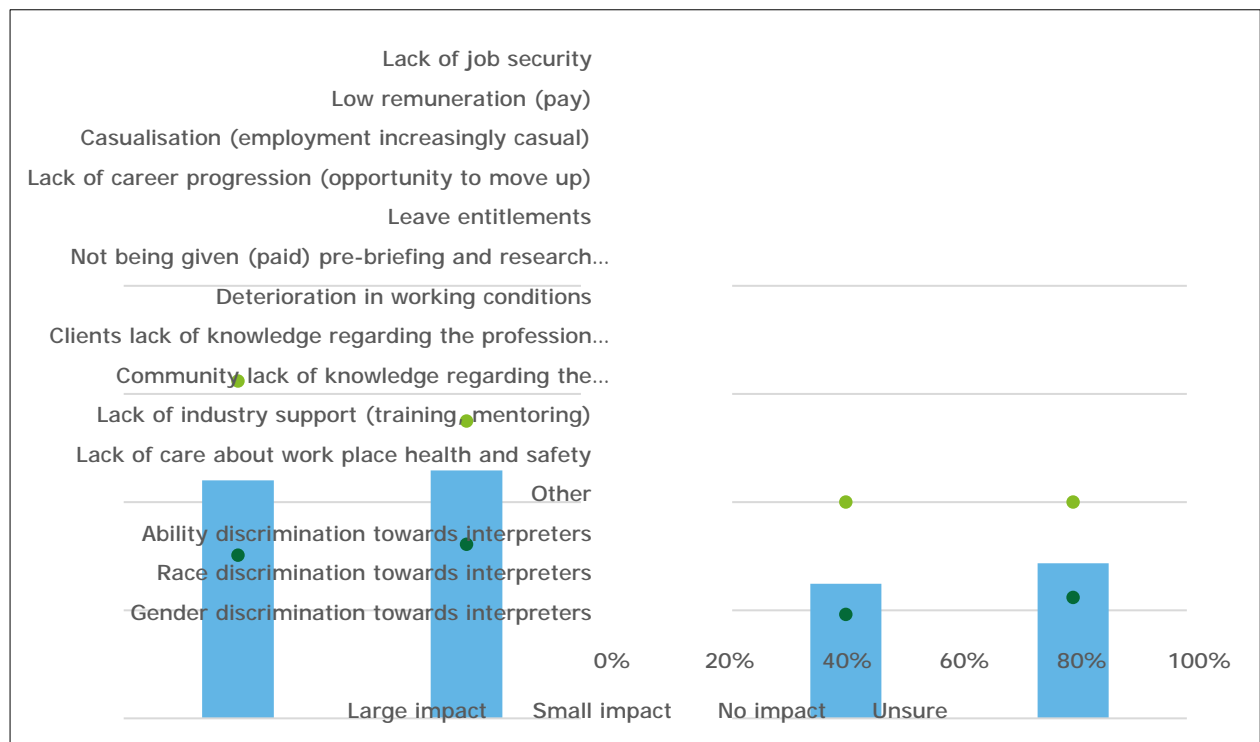


Source: Deloitte Access Economics, based on Department of Home Affairs Language Sector Sustainability Survey (2023).

**Box 6.1: Consultation findings on interpreter satisfaction**

Consultation with industry representatives highlighted a number of concerns that could affect workforce retention:

- **Poor professionalisation of the industry:** interpreters have expressed significant frustration over poor working conditions (e.g., breaks and lack of support in managing difficult or sensitive matters), inadequate support and training, and low remuneration.[58]

- **Perceived devaluation of professional interpreters and certification:** Department of Home Affairs Language Sector Sustainability Survey respondents report similar rates of pay for all interpreters regardless of certification levels. This, combined with the prevalence of use of lower or uncertified interpreters, can represent a disincentive to qualified interpreters looking to practice in the field, and could potentially disincentivise personal investment in professional development.

- **Poor experiences working with service users:** interpreters have reported a mismatch in expectations with service users, which reflects poor understanding of the role and requirements of interpreters. This ranges from an over-simplification of the role (e.g., expecting interpreters to provide on-demand word-for-word interpreting without regard for cultural, linguistic or contextual considerations) to expectations that they undertake tasks and functions which fall outside their area of responsibility (e.g., advocacy or physical assistance).

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[58] In particular, evidence from the interpreting sector (via studies, surveys and consultations) has highlighted the complex linguistic and communication skills and significant mental processing demands required to deliver effective interpreting in courts, particularly over extended periods and conversely significant dissatisfaction from interpreters on poor working conditions and treatment/understanding of interpreters in courts.

There is also significant variation in pay rates for interpreters across LSPs (Chart 6.3). Interpreters working for a LSP paying the highest rate will receive an hourly rate that is 80% higher compared to an interpreter working for an LSP with the lowest pay rate. There are also differences in pay arrangements across LSPs, with only one of the four respondent LSPs having different pay rates by certification level.

Chart 6.3: Variation in average hourly rates across select LSPs, 2023 dollars



Source: Deloitte Access Economics, based on LSP data request. Average hourly charge rate calculated based on an interpreting instance requiring 90 minutes. This was then divided by 1.5 to derive the hourly rate.

## 6.4    Implications for the future costs of sub-optimal interpreting

From 2023 to 2033, demand for interpreters is projected to increase by 18%. On the supply side (supply of workers in the interpreting sector), the potential to see growth appears less assured.

Assuming the supply of interpreters remains fixed at 2023 levels (given the uncertainty on the supply side factors), the lower bound economic and social costs of sub-optimal interpreting for the Australian Government and public hospitals and health services (extrapolated total) would grow to $385 million per annum, in real 2023 dollar, by 2033. When considering latent demand, the upper bound annual economic and social costs is expected to be higher at $1.1 billion by 2033.

The potential future costs of sub-optimal interpreting could be higher if supply does not remain at current levels. If 33% of the sector leave based on stated intentions over the next decade and are not replaced by new workers, the costs are expected to be higher than the figures presented in Table 6.1. Conversely, if worker supply grows relative to 2023 levels, the costs are likely to be lower than the projections.

Table 6.1: Estimated potential future economic and social costs of sub-optimal interpreting ($ millions, 2023 dollars)

| | Lower bound (low-quality, unfilled demand) | | Upper bound (lower bound + latent demand) | |
|---|---|---|---|---|
| | 2023 | 2033 | 2023 | 2033 |
| Aged Care | 10.8 | 12.8 | 93.5 | 110.5 |
| Legal settings | 8.5 | 10.1 | 8.5 | 10.1 |
| HSP | 12.3 | 14.6 | 40.6 | 48.0 |
| Services Australia | 4.1 | 4.8 | 4.1 | 4.8 |
| **Aus Gov case studies** | **36** | **42** | **147** | **173** |
| Qld public hospital and health services | 24.4 | 28.8 | 44.5 | 52.6 |
| **Total case studies** | **60** | **71** | **191** | **226** |
| Uncaptured relevant Aus. Gov Agencies* | 40.4 | 47.8 | 289.1 | 341.6 |
| Public hospital and health services (ROA) | 225.3 | 266.3 | 411.7 | 486.5 |
| **Extrapolated total^** | **326** | **385** | **892** | **1,054** |

Source: Deloitte Access Economics (2023). *Relevant Australian Government Agencies refer to those responsible for delivering the case studies: Department of Health and Aged Care, Department of Home Affairs, AAT, FCFCOA and Federal Court, and Services Australia. ^Extrapolated total refers to the case studies + relevant Aus gov agencies + public hospital and health services (ROA).

**Federal Government:** Independent inquiry into the responsiveness of Australian Government services to Australia's culturally and linguistically diverse communities

**Queensland Government:** Language Services Policy Review

**Queensland Government:** Language Services Strategic Review

**Department of Social Services and Department of Immigration and Border Protection:** Joint Review of government investment in the Translating and Interpreting Industry

**Victorian Government report:** Language Services in Victoria – profile and future need

2010  2011  2012  2013  2014  2015  2016  2017  2018  2019  2020  2021  2022

# 7 Conclusions

## 7.1 The context to the study

Over the past decade, various Australian and state government reports have examined multicultural access and equity issues, and interpreting arrangements (Figure 7.1). These reviews highlight the importance of effective interpreting arrangements to facilitate fair and equitable access to and delivery of government services.

Despite this, to date it appears that, apart from the Queensland Government, few comprehensive public reviews have been undertaken by most government jurisdictions to date, resulting in poor understanding of the full size, scale and impact of the issues.

Figure 7.1: Timeline of select government reviews related to interpreters



Source: Deloitte Access Economics
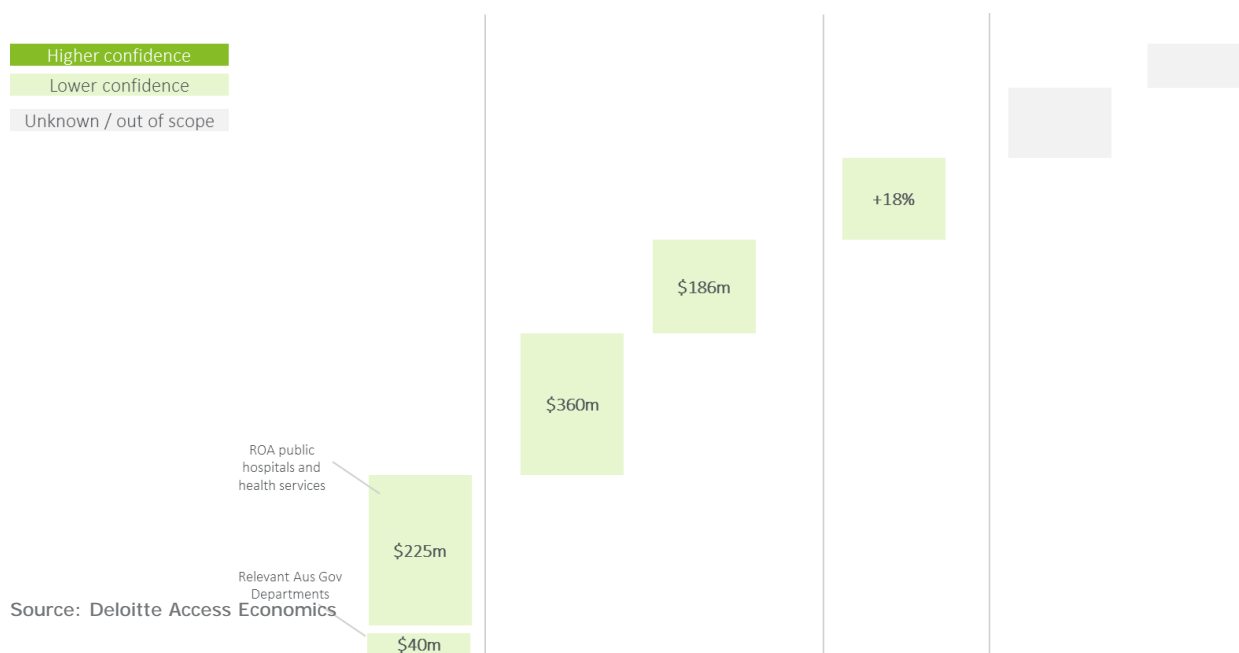
## 7.2 The economic and broader case for change

This study aims to draw on the best available estimate to estimate the economic and social costs of sub-optimal interpreting. While a comprehensive view of the sector is not feasible given the lack of centralised data collection on interpreting use, quality and outcomes, a *lower bound* estimate has been estimated based on areas with relatively stronger evidence.

As a lower bound, Deloitte Access Economics estimates that the current provision of sub-optimal interpreting costs the Australian economy and society $326 million per annum for Australian Government case studies and public hospital and health services across Australia. Based on known government procurement data, this compares to $75 million per annum being spent on interpreter services in these areas.[59]

The lower bound estimates provide preliminary evidence on the economic case for improving interpreter services. The true economic and social costs associated with sub-optimal interpreting in Australia are likely to be greater when considering:

• A sizeable proportion of government interpreting is delivered in other service areas including police and courts, and education. However, given that 80% of Australian government and

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[59] See Figure 2.1 for the included procurement expenditure.

state government interpreter procurement is in the case study service delivery areas, these costs are likely to be relatively small.

- Interpreting is frequently not requested, with underutilisation seen in the health, disability and ageing space. When including latent demand, the upper bound economic and social cost across the extrapolated range of service delivery areas increases to $892 million per annum, with over half of costs relating to public hospitals and health services.
- The economic and social costs only consider the first-round direct outcomes from sub-optimal interpreting. The costs are likely to be greater when considering the downstream effects. For instance, longer hospitalisation is likely to be reduced with reduced labour supply, which would have flow-on effects for businesses.

Figure 7.2 provides an overview of the scope of economic and social costs quantified in this study, compared to the full costs of sub-optimal in interpreting across Australia. Without government intervention, the economic and social costs are expected to grow by 18% over the next decade based on the projected demand growth. If the supply of interpreters falls compared to current levels, the growth in costs could be greater still.

Figure 7.2: The scope of quantification for this study and broader economic and social costs
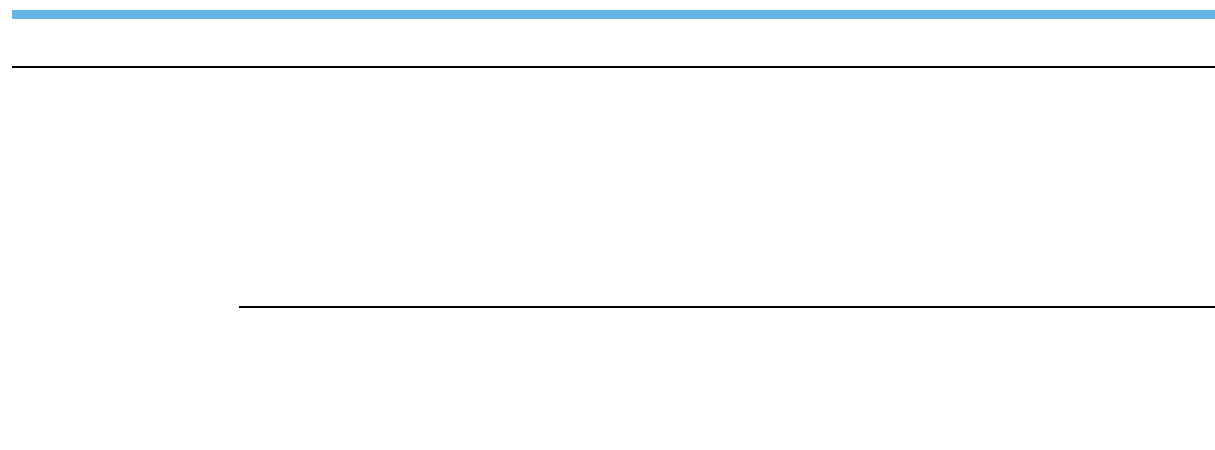
Source: Deloitte Access Economics (2023).

Beyond the economic case, the Australian Government should also be guided by moral and legal considerations in ensuring the sustainability of the interpreter sector.

Australia is party to core international human rights treaties recognising the entitlement of all persons to "the enjoyment of the highest attainable standard of physical and mental health" and to

"a fair and public hearing".[60,61] Inadequate interpreting puts Australia's ability to achieve these international human rights commitments at potential risk.

Further, all levels of government have policies and regulations in place that provide for equal language access by all Australians to key services. The obligations are addressed in several legislative and policy instruments including the Commonwealth Multicultural Access and Equity Policy, Freedom of Information Act 1982 (Cwlth), the Crimes Act 1914 (Cwlth) and state-level Human Rights Acts and Anti-Discrimination legislation. Inadequate interpreting also compromises the government's ability to achieve its stated policies.

## 7.3    Potential role for government policy

Improving the quality and accessibility of interpreting is expected to reduce the current and expected future economic and social costs associated with market failure.

Procurement can play a role in both directly improving the quality of current interpreting provision and supporting other future changes.

- Setting standards on quality and mode of service provision (e.g., requirements on the use of certified interpreters, interpreters with certain tertiary qualifications, or specifying the use of video conferencing) could directly improve the quality of interpreting and reduce instances of poor outcomes.
- Setting minimum working and remuneration conditions could encourage upskilling, build the future workforce supply and support sector sustainability.
- Set requirements for better data collection on interpreter use, quality, and outcomes. This would further build confidence on the economic and social costs, provides a foundation for evaluating impacts, and build the evidence base for future investment.

However, procurement policy should be supported by a range of government policies aimed at addressing broader issues related to low-quality, unfilled demand and latent demand (Table 7.1).

Table 7.1: Potential government policy levers in supporting sector sustainability

| Potential Levers | Potential action/recommendation | Potential benefit |
|---|---|---|
| **Procurement policy** | • Setting standards on quality and mode of service provision.<br>• Setting minimum working and remuneration conditions, given existing variation across LSPs (See Chart 6.3). | • Improve quality of current provision and reduce economic and social costs of *low-quality* interpreting.<br>• Support workforce attraction and retention, which could reduce instances of *unfilled demand* and improve workforce quality. |
| | • Establish a clearer and more consistent set of service-wide data standards.<br>• Support better data collection on interpreter use, quality, and outcomes. | • Building the evidence base required to support future investment in the sector. |
| **Awareness and sector engagement** | • More engagement with services using interpreters to formalise processes for working with interpreters.<br>• Build awareness in health, disability and aged care sectors on eligibility for free or government funded interpreting services. | • Increase utilisation of interpreters and decrease the economic and social costs associated with *latent demand.* |

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[60] United Nations (General Assembly). (1966). International Covenant on Economic, Social, and Cultural Rights. Treaty Series, 999, 171.
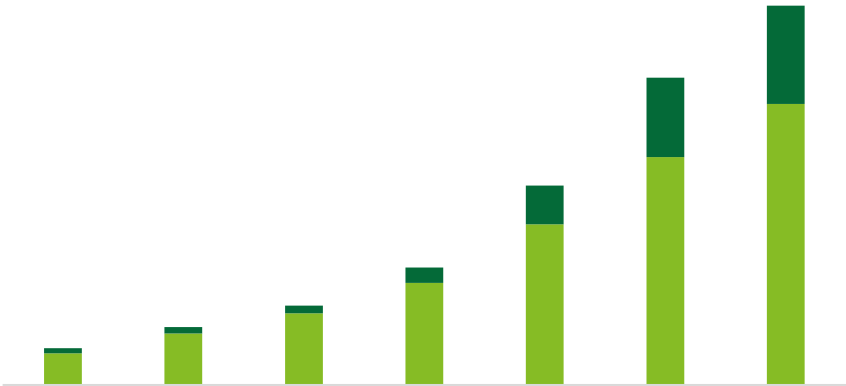[61] United Nations (General Assembly). (1966). International Covenant on Civil and Political Rights.

# Appendix A

|  |  |  |
|---|---|---|
|  | • Strategic engagement with CALD communities on the importance of accessing formal interpreters. |  |
| **Training and strategic workforce planning** | • Ensure supply is responsive, and targeted to the right areas.<br>• Increased support for NAATI to expand its language testing capabilities.<br>• Support access to high quality training and certification for interpreters. | • Ensure supply is in the right languages and skills to meet changing needs in demand.<br>• Increase the number of certified interpreters, and ensure increased delivery by certified interpreters. |
| **Government cooperation** | • A whole-of-government approach across all levels of government to address the issues associated with sub-optimal interpreter access.<br>• Consider the establishment of in-house language services. | • Coordination and consistent approaches to support more effective uplifting of quality and meeting unmet demand. |

Source: Deloitte Access Economics (2023).

# : Further insights on persons with limited English proficiency

## A.1. Population with limited English proficiency by age group

Generally, middle-aged and older cohorts are more likely to have low English proficiency (Chart A.1), and almost 70% of the overseas-born population with low English proficiency are over 60 years old. Comparatively, only 3% of the overseas-born population with no English proficiency are below the age of 30, indicating considerably better English-speaking ability in younger cohorts.

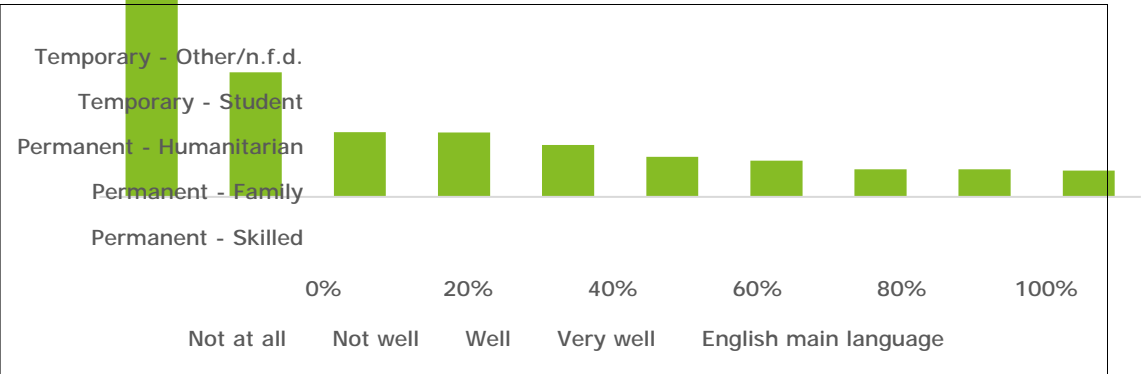Chart A.1: Proportion of people born overseas and with limited English proficiency by age group



Source: Australian Bureau of Statistics (2022). Sample is taken from overseas born population, over five years of age.
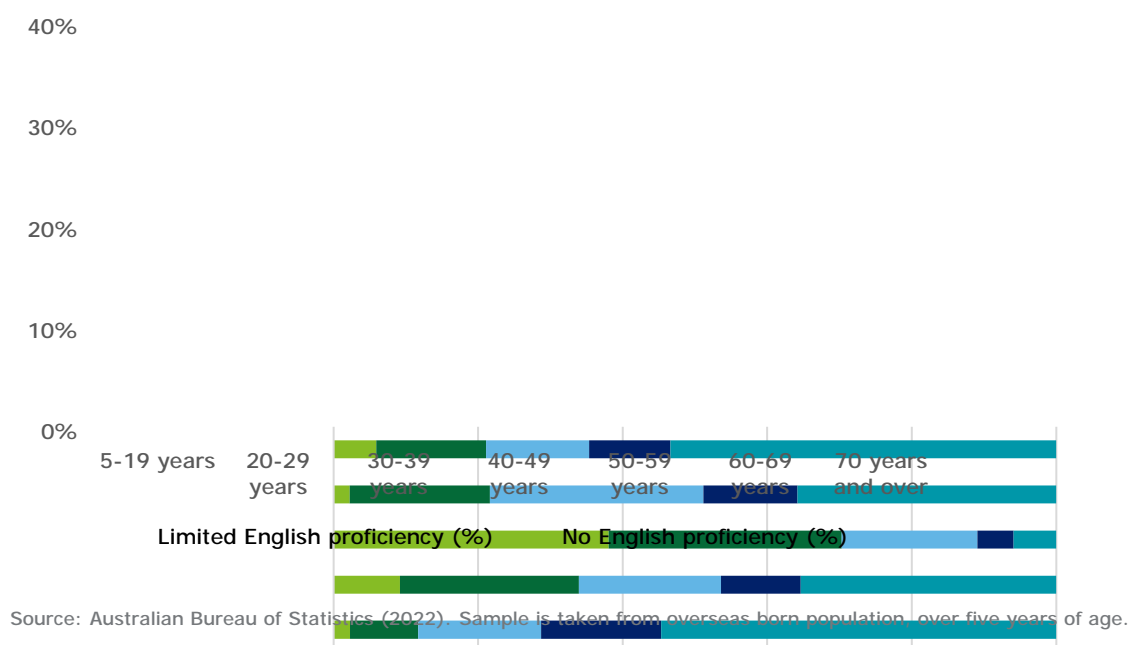
## A.2. Population with limited English Proficiency by State

The proportion of the population with low English proficiency is higher in more populous states due to the higher proportion of international migrants. Chart A.2 shows the percentage of each state's estimated resident population who have limited English proficiency. As the states with the highest levels of net overseas migration, New South Wales and Victoria can reasonably be expected to have the largest populations with limited English proficiency. Comparatively however, the proportion of people with limited English proficiency in Queensland is smaller than expected given the importance of net overseas migration for population growth in the state.

# Appendix B

Chart A.2: Percentage of state population with limited English proficiency

4.1%

3.2%

1.0%

0.6%

0.5%

0.1%

0.1%

0.0%

| New South Wales | Victoria | Queensland | Western Australia | South Australia | Australian Capital Territory | Northern Territory | Tasmania |
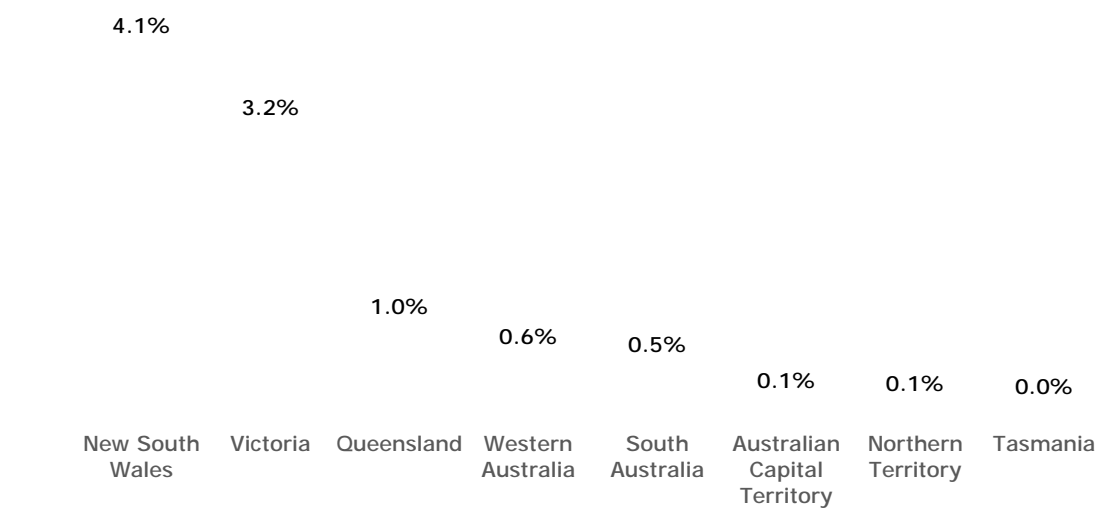
Source: Australian Bureau of Statistics, 2021. Sample is taken from overseas born population, over five years of age.

## A.3.    Population with limited English Proficiency by visa type

Different migrant cohorts also reflect varying degrees of English proficiency. Of those persons arriving in Australia on a humanitarian visa, 70% have limited English proficiency, more than twice as many as any other category. Family visa holders are the next highest group, with limited English proficiency in 34% of persons arriving under this visa. As would be expected, permanent skilled migrants generally have the highest average level of English proficiency (Chart A.1).

Chart A.3: Distribution of population by English proficiency by visa type upon arrival to Australia

Temporary - Other/n.f.d.

Temporary - Student

Permanent - Humanitarian

Permanent - Family

Permanent - Skilled

0%   20%   40%   60%   80%   100%

Not at all    Not well    Well    Very well    English main language

Source: Australian Bureau of Statistics (2019)

# : Professional interpreter supply

This Appendix provides descriptive statistics of interpreters (by headcount) with NAATI certifications.

## B.1. Interpreters with NAATI certifications

According to the National Accreditation Authority for Translators and Interpreters (NAATI), there are estimated to be over 7,000 practicing interpreters with some level of formal certification in Australia.

Chart B.1 shows the languages with the largest number of practicing interpreters, irrespective of certification level. There are more Mandarin interpreters than any other language, and the top five languages account for half of the total supply of interpreters. These languages differ from those in Chart 1.1, indicating that despite the prevalence of Thai speakers with low proficiency, there are few interpreters. Comparatively, there are proportionally more Persian speakers despite the language not being as commonly spoken among people with limited English proficiency.

Chart B.1: Languages with the largest number of practising interpreters
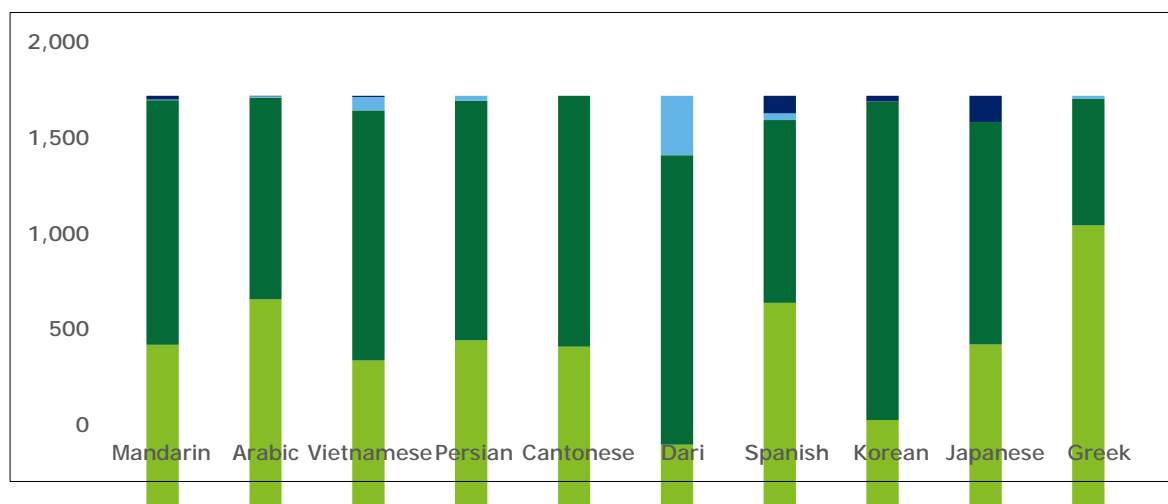


Source: National Accreditation Authority for Translators and Interpreters (2022)

The distribution of interpreters by certification level is shown in Chart B.2:

- 2,200 are certified interpreters, who can accurately transfer complex, non-specialised messages from a source language into a target language.
- Over half are *provisional* certified interpreters, who can accurately transfer non-complex, non-specialised messages from a source language into a target language.
- A further 1,000 are only recognised interpreters, meaning they have satisfied minimum training requirements and have experience as an interpreter, but have not been tested. This credential is generally granted by NAATI to individuals interpreting in low demand languages where testing for certification is not yet available.
- In addition to the basic certification, interpreters can also attain specialist qualifications to work in health and legal services and act as conference interpreters.[62]
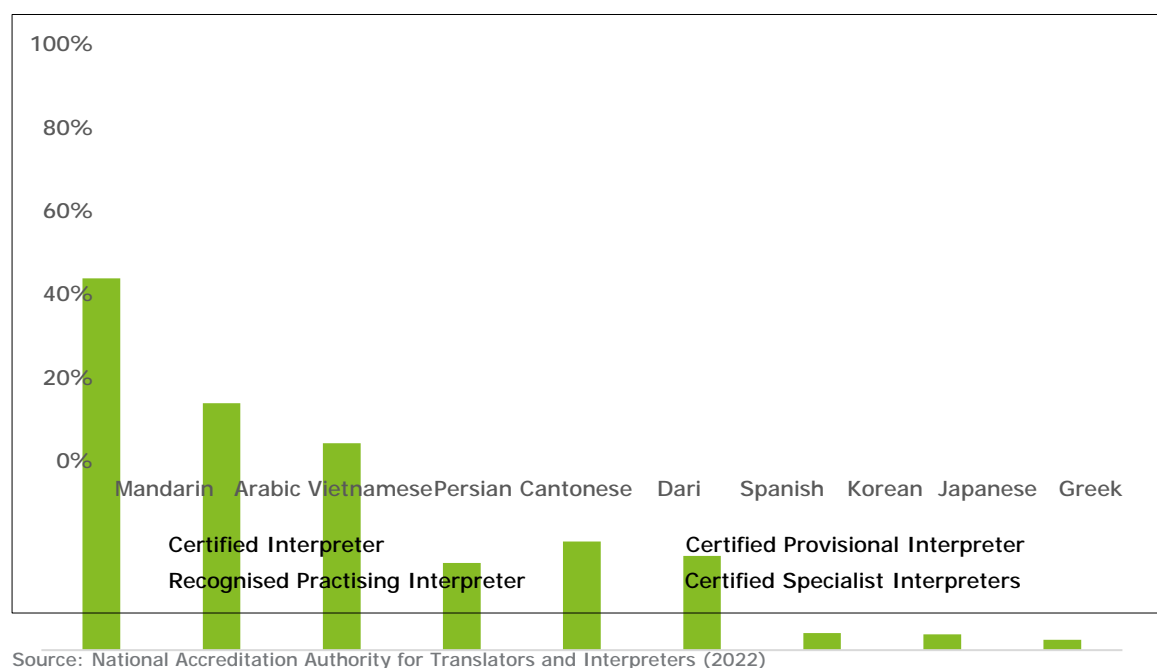
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[62] There are very few interpreters in these roles in Australia, with only five each of specialist interpreters for health and legal services, and only 45 conference interpreters in total. These certifications are generally only seen in more commonly spoken languages.

Chart B.2: Distribution of NAATI-certified interpreters



3,768

2,248

994

55

Certified Provisional Interpreter — Certified Interpreter — Recognised Practising Interpreter — Certified Specialist Interpreters

Source: National Accreditation Authority for Translators and Interpreters (2022)
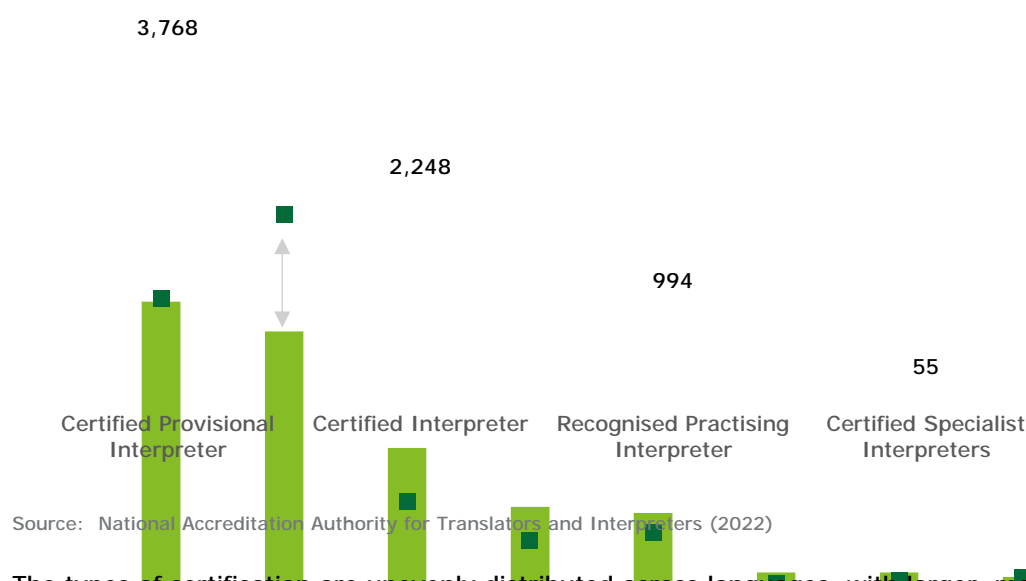
The types of certification are unevenly distributed across languages, with larger, more established language groups more likely to have more certified provisional interpreters or certified interpreters. Comparatively, languages spoken in smaller communities or by humanitarian migrants are more likely to have a larger number of recognised practicing interpreters (Chart B.3).

Chart B.3: Languages with the largest number of practising interpreters, by qualification type



Mandarin   Arabic   Vietnamese   Persian   Cantonese   Dari   Spanish   Korean   Japanese   Greek

Certified Interpreter — Certified Provisional Interpreter
Recognised Practising Interpreter — Certified Specialist Interpreters

Source: National Accreditation Authority for Translators and Interpreters (2022)

For new and emerging communities, there are likely to be a larger proportion of recognised practicing interpreters, since NAATI may have a smaller pool of resources, with a limited capacity for testing.

While there are over 7,000 certified interpreters, only 4,000 persons report their occupation as interpreters in the 2021 census. When including translators, this increases to 5,700 persons. This suggests that the utilisable supply of interpreters is smaller than suggested by NAATI certification figures. Alternatively, it suggests that there is limited work for interpreters and some interpreters do not consider this their primary occupation.

Compared to the share of the population with limited English proficiency, the census recorded relatively more interpreters in Queensland, South Australia and Western Australia (Chart B.4).

Chart B.4: State share of total interpreter jobs compared to the share of national population with limited English proficiency (LEP)
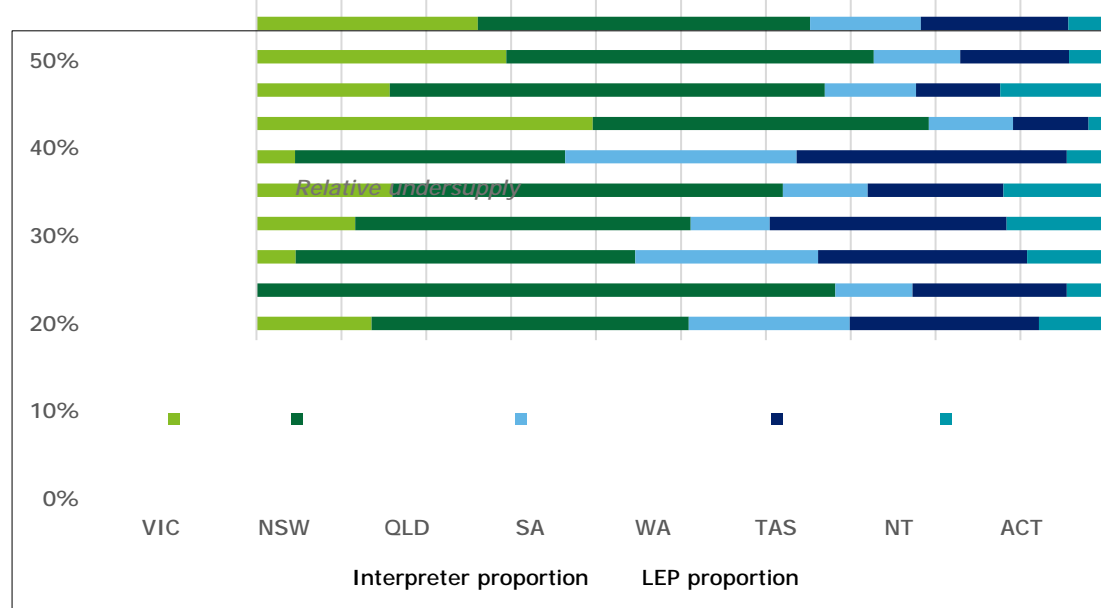


Source: Australian Bureau of Statistics (2016) and National Accreditation Authority for Translators and Interpreters (2022)

The majority of interpreters do not work full-time hours, with close to a third working less than 10 hours a week (Chart B.5). Less than 12% of interpreters are effectively working full time, meaning they work over 40 hours a week.

Chart B.5: Hours worked as a proportion of the total interpreter workforce
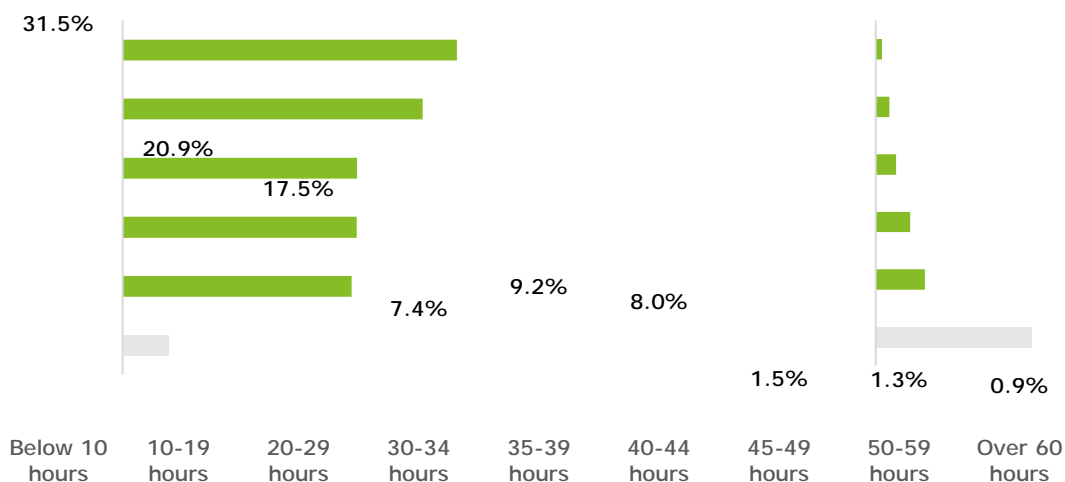


Source: Australian Bureau of Statistics (2021)

## B.2.    Sufficiency of existing interpreter supply

Overall, 60% of surveyed interpreters and translators stated there were enough interpreters to meet current demand either always, or most of the time (Chart B.6).

Chart B.6: Interpreter and translator responses on whether there are enough interpreters to meet the current demand by language
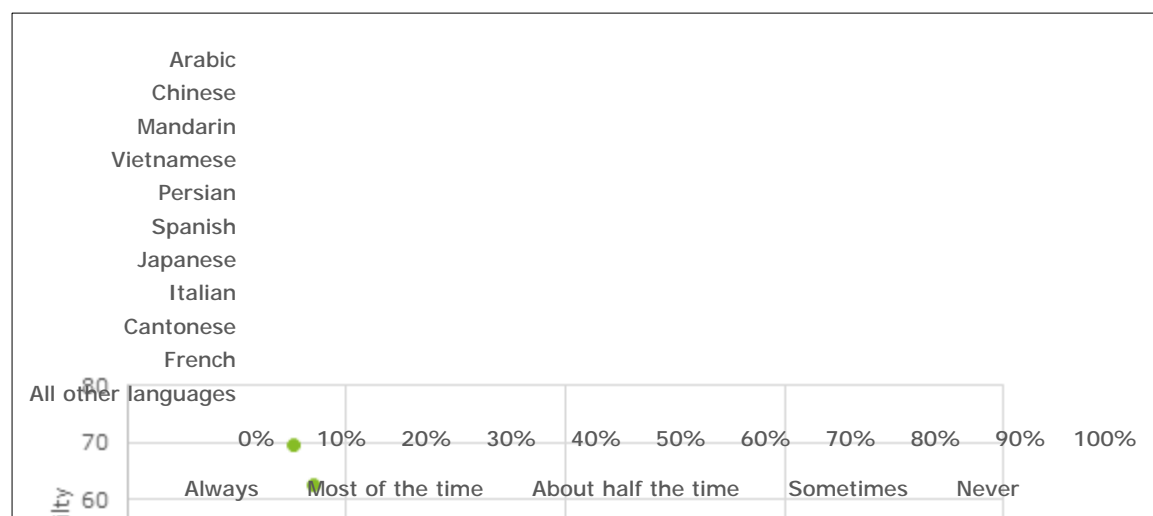
Arabic
Chinese
Mandarin
Vietnamese
Persian
Spanish
Japanese
Italian
Cantonese
French
All other languages

0%    10%   20%   30%   40%   50%   60%   70%   80%   90%   100%

Always      Most of the time      About half the time      Sometimes      Never

Source: Department of Home Affairs Language Sector Sustainability Survey (2023). Top 10 languages by sample size are shown. N = 1,673. Question = Do you think there are enough interpreters to meet the current demand for [language]?

Different populations are likely to have different rates of access to professional interpreters, suggesting *relative* misalignment between demand and supply across languages.

Chart B.7 shows the top and bottom five languages in terms of 'professional interpreter accessibility', which is estimated as the number of total certified interpreters for every 1,000 people with limited English proficiency.[63]

Chart B.7: Top and bottom languages by 'professional interpreter accessibility'

| Top five | | Bottom five | |
|---|---|---|---|
| Ukrainian | 69.7 | Pwo Eastern Karen | 0.4 |
| Amharic | 62.6 | Teochew (dialect of Min Nan Chinese) | 0.8 |
| Oromo | 48.9 | Min Nan Chinese | 1.3 |
| Tigrinya | 48.8 | Maltese | 2.1 |
| Kirundi | 47.8 | Lao | 3.1 |
| Median | 9.7 | Median | 9.7 |

Source: National Accreditation Authority for Translators and Interpreters (2022), ABS Census.

Chart B.8 explores the relationship between 'interpreter accessibility' and the size of the population. There is a weak negative relationship between the two measures (Pearson correlation coefficient of -0.19), and access to interpreters varies considerably across language groups.

- People who speak languages such as Mandarin and Arabic have relatively better access to practicing interpreters, with services more readily accessible for people with limited English proficiency.

[63] The analysis is limited to languages with over 500 people with limited English proficiency.

# Appendix C

- At the same time, other commonly spoken languages such as Spanish do not have the same access to interpreters, indicating it is not only smaller language groups facing supply-side interpreting challenges.
- Mid-size language groups tend to have the greatest access to interpreters, with an average of 70 practising interpreters for every 1,000 people who speak Ukrainian and have limited English proficiency. However, this consists almost entirely of recognised practising interpreters, with few certified interpreters.
- While in aggregate, some small communities have a high degree of interpreter accessibility, this may not consider the number of interpreters that can practically be used. Patient confidentiality concerns for sensitive matters in small communities could mean that there are few interpreters available.

Chart B.8: Number of interpreters per 1,000 people for languages with over 500 LEP speakers

Source: National Accreditation Authority for Translators and Interpreters (2022); ABS (2022)

# : Guidelines for working with interpreters

A number of standards and guidelines have variously been developed, both by the sector and by related government and downstream industry stakeholders, which play a significant role in informing the quality of interpreters and quality of service delivered. Some of these are explored below (Table C.1).

This table primarily focuses on organisational and sector specific guidelines and standards which are recognised and currently applied in each of the key focus areas and is not intended to be a comprehensive list of best practice guidelines available.

Table C.1: Industry standards for interpreting services

| Industry standard | Description |
|---|---|
| Code of ethics | Developed by the Australian Institute of Interpreters and Translators, the Code of Ethics (the Code) sets the standards for the ethical conduct of translators and interpreters in Australia and New Zealand. The key principles of the code cover professional conduct, confidentiality, competence, impartiality, clarity of role boundaries, maintaining professional relationships, professional development and professional solidarity. |
| NAATI certification | • NAATI's certification system is the primary measure of qualification for interpreters operating in the sector and is designed to evaluate if a practitioner demonstrates the skills needed to practice as an interpreter in Australia, providing assurance to clients on practitioner capability.<br>• The system operates on a tiered basis reflecting various levels of testability, competency and specialisation.<br>• The **Certified Interpreter credential** is currently tested for 24 languages. It is awarded to higher capability interpreters who have demonstrated a higher level of competence in interpreting and are capable of handling more complex and demanding tasks across a range of non-specialist domains.<br>• The **Certified Provisional Interpreter credential** is currently tested for 65 languages. It verifies that an interpreter is capable of interpreting non-complex, non-specialised messages and accurately reflecting the meaning across a range of non-specialist domains.<br>• **Recognised Practicing Interpreter status** is further provided for low demand languages and languages of new and emerging communities where NAATI testing is not available. This requires evidence of completion of formal training and work practice as a translator and or interpreter.<br>• **Specialist interpreter certifications for the Health and Legal sectors** are currently tested for six languages (including AUSLAN). These verify the capabilities of advanced interpreters, who must have extensive knowledge of the relevant operating sector. |

Across most of the service delivery areas of interest, there is a range of Departmental or other industry guidelines on the use of interpreting services that provide guidance on when professional services should ideally be engaged across various settings (Table C.2).

Table C.2: Recommended use of professional interpreting services across settings

| Setting | Guidance on professional interpreter use |
| --- | --- |
| Australian Government | **Australian Government Language Services Guidelines**<br>• Provide guidance to Australian Government agencies responsible for developing policy and administering programs and services for people with limited English proficiency in Australia.<br>• Government agencies are encouraged to use **NAATI-certified professional interpreters as the default approach** when communicating with people with limited English proficiency.<br>• Use of a professional NAATI-certified interpreter is recommended particularly for situations when the information or policy is complex or of a legal or technical nature; where required by legislation to engage an interpreter; or where there is a risk of misunderstanding by the client which may result in a risk to themselves or others.<br>• The guidelines **discourage use of friends and family members**, particularly to interpret complex, technical and sensitive information. Children under 18 years of age should not be used as interpreters in any situation.<br>• In determining an **appropriate mode of interpretation**, agencies are encouraged to consider factors such as communication complexity, setting and the client's individual preference. Video interpreting via secure platforms is increasingly recommended for its accessibility and ability to provide visual cues to facilitate interpretation. |
| Health, disability and ageing | **Queensland Health Department Working with Interpreters Guidelines**<br>• In general, an accredited interpreter should be engaged when,<br>  - the information to be communicated is significant for health and/or health outcomes,<br>  - the person has a Queensland interpreter card or requests an interpreter or<br>  - the person's English skills are assessed to be inadequate for the situation.<br>• Under the arrangements, Health Service District Interpreter Service Coordinators allocate bookings based on the following preference:<br>  1. NAATI accredited professional interpreters with health experience<br>  2. NAATI professional interpreter (Level 3)<br>  3. NAATI para-professional interpreter (Level 2) and<br>  4. NAATI recognised.<br>• In very limited instances where there is no on-site or telephone interpreter available, staff may use bilingual speakers in the following order:<br>  1. Recognised interpreters for languages where certification is not possible<br>  2. Queensland Health staff (health professionals and other health employees), and<br>  3. Relatives or friends, predominantly for simple, straightforward communications or in emergency situations.<br><br>**Department of Health and Aged Care guidelines for accessing the Translating and Interpreting Service (TIS National) for aged care providers**<br><br>• Provides guidance to aged care providers on interactions where TIS National services may be engaged at no cost by eligible providers. Use for other reasons is at the Provider/client's cost. |

| | |
|---|---|
| | • Approved providers can use TIS National to support discussions with people who use aged care services or potential users of aged care services about their care or available services. |
| | • Phone interpreting services are recommended as the default unless there is a genuine need for an on-site interpreter.<br>• Registration is required to access the service. |
| **Legal and taxation** | **Guide for Clinicians Working with Interpreters in Healthcare Settings (Migrant & Refugee Women's Health Partnership)**<br>• Provides guidance to clinicians on effective communication and working with interpreters, including recommended approaches and good practice. The guidelines highlight:<br>   o  the importance of clear and effective communication in good clinical practice and the role of interpreters in facilitating this and addressing medico-legal risks in interactions with patients with low English proficiency (for example, with respect to informed decision-making, consent and complex procedures and or instructions)<br>   o  The need for ongoing assessment of patient communication and comprehension capabilities and needs and avoidance of assumptions when assessing need for an interpreter<br>   o  avoidance of reliance on use of minors, friends, family members and web-based translation services (i.e. informal interpreting avenues)<br>   o  consideration of patient cultural and personal sensitivities and preference when engaging an interpreter and<br>   o  the interpreter's role and scope of practice.<br><br>**Recommended National Standards (RNS) for Working with Interpreters in Courts and Tribunals.**<br>• The standards highlight that, under the principle of procedural fairness courts and tribunals have an obligation to accommodate the language needs for all people before the court (parties and witnesses) with limited English proficiency through provision of interpreting services where this is identified by the various parties concerned as being required.<br>• Courts and tribunals should preference engagement of a qualified interpreter, namely a NAATI-certified interpreter, in the following order of preference:<br>   1.  Certified Specialist Legal Interpreter<br>   2.  Certified Interpreter<br>   3.  Certified Provisional Interpreter<br>   4.  Recognised Practicing Interpreter<br>   5.  Suitable person.<br>• For languages with a sufficiently large number of Certified Interpreters, higher qualified interpreters should be engaged.<br>• The default assumption is that interpreting services are provided on-site. However, where an interpreter is unable to attend in person, communication via audio-visual link is preferred over telephone and appropriate equipment should be used.<br><br>**Interpreter Protocols for ACT Courts and Tribunals**<br>• The protocols indicate that an interpreter should be engaged when a person has difficulty understanding English, affecting their capacity to understand their rights and obligations and to communicate with a court or ACAT.<br>• The highest level of certification should be requested when booking an interpreter (also noting availability of specialist legal and health interpreters)<br>• Where a non-accredited interpreter needs to be used, options to ensure adequate interpreting quality include using more than one interpreter or potentially engaging an interpreter in a second or third language where the person has multi-language proficiency |

# Appendix D

- For matters which require an interpreter for less than an hour or where there is difficult getting access to an onsite interpreter telephone or videoconference interpreting are recommended for consideration

*There are guidelines but they have not been provided*

**Services Australia**

# : Disaggregating demand calculations

## D.1.    Latent demand calculations

Latent demand is estimated based on the information on *unfilled demand* and *current provision*. The calculations are highlighted in Table D.1.

- **Unfilled demand as a % of requested demand**: estimated based on LSP data (see Chart 3.2).
- **Current provision as a % of total potential demand**: estimated using a range of sources, including the existing literature and consultations. Further details on the evidence underpinning the current provision estimates is given in Table 3.2.
- **Unfilled demand as a % of total potential demand**: calculated using (1) and (2). Unfilled demand is equal to (2)/ [1 – (1)] – (2).
- **Latent demand as a % of total potential demand**: calculated as 1 – (3) – (2).

Table D.1: Latent demand calculations

| Sector | (1) Unfilled demand as a % of requested demand | (2) Current provision as a % of total potential demand | (3) Unfilled demand as a % of total potential demand | (4) Latent demand as a % of total potential demand |
|---|---|---|---|---|
| Aged care | 12% | 31% (literature) | 4% | 65% |
| Legal settings | 7% | 93% (consultation) | 7% | 0% |
| HSP (Immigration) | 8% | 65% (literature) | 6% | 30% |
| Services Australia | 6% | 94% (assumption) | 6% | 0% |
| Public hospitals and health services | 12% | 68% (literature) | 9% | 23% |

Source: Deloitte Access Economics (2023).

## D.2.    Low quality interpreting calculations

The prevalence of low-quality interpreting given in Table 3.5 is estimated as a function of:

- **Base rate risk of low-quality interpreting**: the complexity and technical nature of the interpreting. This is assumptions based, and qualitatively informed by the stakeholder consultations.
- **Risk multiplier factor due to interpreters employed**: additional risk due to working with interpreters with low or no NAATI certification and the delivery of interpreting through telephone.

The risk multiplier factor for each combination of interpreter certification and mode of delivery is given in Table D.2.

- Across three studies, the use of telephone interpreting is on average associated with a 31% increase in risk compared to in person and videoconference interpreting.[64,65,66]
- The literature suggests that the use of interpreters without certification is associated with a 19% increase in risk compared to interpreters with Specialist Interpreter certifications and Certified Interpreter credentials.[67,68]
- The modelling assumes that the risks associated with telephone interpreting and no certification are additive. That is, an interpreter without certification and delivering interpreting via telephone has a 50% higher risk of providing low-quality interpreting compared to the base rate.

Table D.2: Risk multiplier by NAATI certification and mode of delivery

| | In person | Videoconference | Telephone |
|---|---|---|---|
| Specialist Interpreter certifications, Certified Interpreter credentials | 1.00 | 1.00 | 1.31 |
| Certified Provisional Interpreter credentials, and Recognised Practicing Interpreter | 1.09 | 1.09 | 1.41 |
| Non-certified | 1.19 | 1.19 | 1.50 |

Source: Deloitte Access Economics (2023).

The proportion of interpreting by *telephone* and *non-telephone* delivery (in person and videoconference) and certification by setting are given in the following tables. The proportions are derived using data provided by the LSPs. Information was separately collected on (1) mode of delivery and (2) certification level, and the modelling assumes that interpreters of different certification levels are proportionally distributed by the delivery modes.

Table D.3: Proportion of interpreting delivered by NAATI certification, telephone delivery

| | Specialist Interpreter certifications, Certified Interpreter credentials | Certified Provisional Interpreter credentials, and Recognised Practicing Interpreter | Non-certified |
|---|---|---|---|
| Aged care | 24% | 35% | 19% |
| Public hospital and health services | 18% | 26% | 14% |
| Legal settings: AAT | 18% | 26% | 14% |
| Legal settings: FCFCOA | 0% | 0% | 0% |
| HSP | 18% | 26% | 14% |
| Services Australia | 30% | 54% | 9% |

Source: Deloitte Access Economics (2023).

[64] Hale, Sandra & Goodman-Delahunty, Jane & Martschuk, Natalie & Lim, Julie. (2022). Does interpreter location make a difference?: A study of remote vs face-to-face interpreting in simulated police interviews. Interpreting. International Journal of Research and Practice in Interpreting.
[65] Anttila, A., Rappaport, D. I., Tijerino, J., Zaman, N., & Sharif, I. (2017). Interpretation Modalities Used on Family-Centered Rounds: Perspectives of Spanish-Speaking Families. Hospital Pediatrics, 7(8), 492–498.
[66] Flores G, Abreu M, Barone CP, Bachur R, Lin H. Errors of medical interpretation and their potential clinical consequences: a comparison of professional versus ad hoc versus no interpreters. Ann Emerg Med. 2012 Nov;60(5):545-53.
[67] Anttila et al (2017), Ibid.
[68] Flores et al (2012), Ibid.

Table D.4: Proportion of interpreting delivered by NAATI certification, non-telephone delivery (in-person, videoconferencing)

# Appendix E

| | Specialist Interpreter certifications, Certified Interpreter credentials | Certified Provisional Interpreter credentials, and Recognised Practicing Interpreter | Non-certified |
|---|---|---|---|
| Aged care | 7% | 10% | 5% |
| Public hospital and health services | 13% | 19% | 10% |
| Legal settings: AAT | 13% | 19% | 10% |
| Legal settings: FCFCOA | 31% | 25% | 24% |
| HSP | 13% | 19% | 10% |
| Services Australia | 2% | 4% | 1% |

Source: Deloitte Access Economics (2023). In person and videoconferencing are combined as they have similar risk profiles.

# : Per unit cost modelling parameters

This appendix outlines the key parameters underpinning the per unit economic and social cost estimates for sub-optimal interpreting.

## E.1. Aged care

Table E.1: Baseline assumptions underpinning per unit economic and social cost of sub-optimal interpreting services, aged care

| # | Description | Low-quality interpreting | Not accessing interpreting | Source |
|---|---|---|---|---|
| | Unit | Per person in residential aged care with LEP receiving sub-optimal interpreting | | |
| 1 | Instances of sub-optimal interpreting | 100% | 100% | By definition |
| 2 | % of instances resulting in poor outcomes | 17% (half of not accessing interpreting) | 34% | Assumption |
| A1 | Cost per annum due to reduced QOL | $1,170 | $2,300 | 1 X 2 X 3 X 4 |
| 3 | Impact of person-centred care on quality of life | 7% | 7% | Jones (2010)[69] Yasuda & Sakakibara (2016)[70] McGilton et al (2017)[71] |
| 4 | Value of quality of life (pa) | $94,000 | $94,000 | ABS, average weekly earnings |
| A5 | Higher costs of delivery per annum due to less person-centred care | $2,900 | $5,800 | 1 X 2 X 5 X 6 |
| 5 | Efficiency saving | 15% | 15% | Kari et al (2022)[72] Ballard et al (2018)[73] |
| 6 | Cost per annum of permanent residential care | $110,650 | $110,650 | AIHW GEN Aged Care, Spending on aged care |

[69] Jones, Carol S., "Culture Change and Quality of Life in Elderly Persons Living in Long Term Care" (2010). UNF Graduate Theses and Dissertations. 423.

[70] Yasuda, M., & Sakakibara, H. (2016). Care staff training based on person-centered care and dementia care mapping, and its effects on the quality of life of nursing home residents with dementia. Aging & Mental Health, 21(9), 991–996.

[71] McGilton, K. S., Rochon, E., Sidani, S., Shaw, A., Ben-David, B. M., Saragosa, M., … Pichora-Fuller, M. K. (2016). Can We Help Care Providers Communicate More Effectively With Persons Having Dementia Living in Long-Term Care Homes? American Journal of Alzheimer's Disease & Other Dementiasr, 32(1), 41–50.

[72] Kari, Heini, Nelli Äijö-Jensen, Hanna Kortejärvi, Jukka Ronkainen, Marjo Yliperttula, Raisa Laaksonen, and Marja Blom. "Effectiveness and cost-effectiveness of a people-centred care model for community-living older people versus usual care— A randomised controlled trial." Research in Social and Administrative Pharmacy 18, no. 6 (2022): 3004-3012.

[73] Ballard, C., Corbett, A., Orrell, M., Williams, G., Moniz-Cook, E., Romeo, R., … Fossey, J. (2018). Impact of person-centred care training and person-centred activities on quality of life, agitation, and antipsychotic use in people with dementia living in nursing homes: A cluster-randomised controlled trial. PLOS Medicine, 15(2), e1002500.

| | | | | |
|---|---|---|---|---|
| A4 | Costs associated with inefficient use of interpreters | $80 | - | 7 X 8 X 9 |
| 7 | % of time wasted | 10% | - | Assumptions, drawing on sector survey question on how often time is wasted. |
| 8 | Cost per occasion | $206 | - | LSP data request |
| 9 | Person receiving interpreting for each instance of poor interpreting | 3.7 | - | Inverse of Table 3.5 |
| A2 | Costs associated with reduced access to aged care services | $900 | $1,800 | 10 X 11 X 6 (no access) |
| | | | | 10 X 11 X 6 X 0.5 (low quality) |
| 10 | Gap in access to aged care between people with LEP and English speakers | 33 pp | 33 pp | AIHW GEN Aged Care, ABS Census |
| 11 | % of gap attributable to interpreter access | 5% | 5% | Assumption |

Source: Deloitte Access Economics (2023).

## E.2.  Public hospital and health services

Table E.2: Baseline assumptions underpinning per unit economic and social cost of sub-optimal interpreting services, public hospitals and health services

| # | Description | Low-quality interpreting | Not accessing interpreting | Source |
|---|---|---|---|---|
| | Unit | Per hospital admission by a patient with LEP receiving sub-optimal interpreting | | |
| 1 | Instances of sub-optimal interpreting | 100% | 100% | By definition |
| 2 | % of instances resulting in poor outcomes | 50% | 100% | Assumption |
| B4 | Additional costs due to higher throughput time | $60 | $75 | 3 X 4 X 1 |
| 3 | Additional throughput time | 0.15 hours (telephone) | 0.41 hours | Kwan et al (2020)[74] Fagan et al (2003)[75] |
| 4 | Value of hospital time | $183 per hour $4,420 per day | $183 per hour $4,420 per day | Hicks et al (2019)[76] AIHW (2014)[77] |
| B4 | Additional costs due to increased hospitalisation length | $2,300 | $4,100 | 1 X 5 X 6 X 4 |

[74] Kwan, M., Jeemi, Z., Norman, R., & Dantas, J. (2020). Interpreter Services in a General Health Setting in Western Australia: A Retrospective Study. ISBN: 978-0-9945338-3-8. Report prepared for the Department of Health, WA. Refugee and Migrant Health Research Program, School of Public Health, Curtin University.
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[76] Hicks P, Huckson S, Fenney E, Leggett I, Pilcher D, Litton E. The financial cost of intensive care in Australia: a multicentre registry study. Med J Aust. 2019 Oct;211(7):324-325. doi: 10.5694/mja2.50309. Epub 2019 Aug 16. PMID: 31420872.
[77] AIHW (2016), Hospital Performance: Costs of acute admitted patients in public hospitals from 2011–12 to 2013–14.

| | | | | |
|---|---|---|---|---|
| 5 | Increased hospitalisation length from not using interpreters | 19% (telephone) | 34% | Abbato et al (2018)[78] Flores et al (2012)[79] |
| 6 | Average hospitalisation length | 3 days | 3 days | AIHW, Admitted patient activity |
| **B9** | **Additional costs due to readmissions** | **$140** | **$280** | **10 X 7 X 2 X 1** |
| 7 | Increased risk of readmissions from not using interpreters | 9 pp (low quality) | 9 pp | Kwan et al (2020) |
| 8 | Cost per readmissions to Australia | $1.5B pa | $1.5B pa | Chua D and Johnson T. (2022)[80] |
| 9 | Readmissions per annum | 505,900 | 505,900 | AIHW, Total hospitalisations Considine et al (2016)[81] |
| 10 | Cost per readmission | $3,000 | $3,000 | 8 ÷ 9 |
| **B1** | **Psychological stress for patients due to lack of informed consent** | **$20** | **$48** | **16 X 11 X 12 X 1 X 2** |
| 11 | % hospitalisations requiring informed consent (surgery) | 24% | 24% | AIHW, Admitted patient activity |
| 12 | Impact of interpreter use on likelihood of receiving informed consent | 25 pp (low quality) | 25 pp | Kwan et al (2020) |
| 13 | Increased likelihood of being anxious/depressed due to lack of information | 38% | 38% | Montgomery et al (1999)[82] |
| 14 | Cost of anxiety/depression | $36 pr day | $36 per day | Deloitte Access Economics (2022)[83] |
| 15 | Days of distress | 60 | 60 | Assumption |
| 16 | Value of informed consent | $806 | $806 | 13 X 14 X 15 |
| **B7** | **Costs to hospitals from informed consent cases** | **$250** | **$500** | **17 X 18 X 12 X 13 X 2 X 1** |
| 17 | Likelihood of pursuing court case wrt informed consent | 5% | 5% | Assumption |

[78] Abbato, S., Greer, R., Ryan, J., Vayne-Bossert, P., & Good, P. (2018). The Impact of Provision of Professional Language Interpretation on Length of Stay and Readmission Rates in an Acute Care Hospital Setting.

[79] Flores G, Abreu M, Barone CP, Bachur R, Lin H. Errors of medical interpretation and their potential clinical consequences: a comparison of professional versus ad hoc versus no interpreters. Ann Emerg Med. 2012 Nov;60(5):545-53.

[80] Chua D and Johnson T. (2022). Avoiding hospital readmissions: the models and the role of primary care. Deeble Evidence Brief 24. Australian Healthcare and Hospitals Association, Australia.

[81] Considine Julie, Fox Karen, Plunkett David, Mecner Melissa, O'Reilly Mary, Darzins Peteris (2019) Factors associated with unplanned readmissions in a major Australian health service. Australian Health Review 43, 1-9.

[82] Montgomery, C., Lydon, A., & Lloyd, K. (1999). Psychological distress among cancer patients and informed consent. Journal of Psychosomatic Research, 46(3), 241–245.

[83] Deloitte Access Economics (2022), The cost of adverse mental health outcomes in the LGBTIQ+ Victorian adult population. Report for Thorne Harbour Health.

| # | Description | Low-quality interpreting | Not accessing interpreting | Source |
|---|---|---|---|---|
| 18 | Compensation damages and legal fees per case | $168,000 | $168,000 | Australian Government Actuary, Fourteenth report on the costs of the Australian Government's ROCS for medical indemnity insurance |
| **B6** | **Costs associated with inefficient use of interpreters** | **$800** | - | **(7 X 8 X 9) + 10 X 9** |
| 7 | % of time wasted | 10% | - | Assumptions, drawing on sector survey question on how often time is wasted. |
| 8 | Cost per occasion | $206 | - | LSP data request |
| 9 | Occasions of interpreting for each instance of poor interpreting | 28[84] | - | Queensland data on language assignments; Inverse of Table 3.5 |
| 10 | Cancellation payments (per occasion of interpreting delivered) | $10 | - | Queensland data on language assignments |
| **B5** | **Additional costs due to booking cancellations** | **$50** | - | **11 X 12 X 13 X 9** |
| 11 | Cancellation % | 20% | - | LSP data |
| 12 | Staff time to rebook | 0.25 hours | - | Assumption based on consultations |
| 13 | Value of admin staff time | $37.5 | - | ABS Census |

Source: Deloitte Access Economics (2023).

## E.3. Legal settings

Table E.3: Baseline assumptions underpinning per unit economic and social cost of sub-optimal interpreting services, AAT and FCFCOA

| # | Description | Low-quality interpreting | Not accessing interpreting | Source |
|---|---|---|---|---|
| | Unit | Per hearing by a person with LEP receiving sub-optimal interpreting | | |
| C3 | Additional costs due to booking cancellations | $10 | $40 | |
| 1 | Proportion of cancellations | 100% | 100% | By definition |
| 2 | Time to re-book interpreters (hours) | 0.25 | 1 | Assumption based on consultations |
| 3 | Value of administrative staff time | $37.50 | $37.50 | ABS Census |
| C4 | Cost of adjournments and waiting for interpreters | $300 | $1,290 | 4 X 5 (no access) (4 X 5 + 7 X 8) X 6 X 9 (low quality) |
| 4 | Opportunity cost per day | $46 | $46 | Estimated based on the likelihood of detention for LEP |

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[84] Calculated as 7 occasions of interpreting per hospital admission; 4 hospital admissions per hospital admission experiencing low quality interpreting.

| | | | | person and wages lost during this time |
|---|---|---|---|---|
| 5 | Wait for next hearing | 28 days | 28 days | Assumption |
| 6 | Adjournments per interpreting hearing | 3.3% | - | Assumption based on consultation |
| 7 | Average time per hearing | 2.5 hours | - | Assumption based on consultation |
| 8 | Hourly costs for the AAT | $373 | - | Derived based on AAT annual report 2021-22 |
| 9 | Instances of interpreting per hearing | 6 | 1 | Derived based on procurement data and LSP data request |
| C1 | Cost of appeals | $40 | - | 10 X 11 X [(12 + 13) + (14 X 4)] |
| 10 | Appeal rate | 26% | - | Assumption based on consultation |
| 11 | Proportion of appeals due to interpreter quality | 2% | - | Assumption based on consultation; Hayes and Hale (2010)[85] |
| 12 | Hearing/preparation cost per appeal to the Court | $3,267 | - | Estimated based on Federal Court Annual reports |
| 13 | Hearing/preparation cost per appeal to the individual | $148 | - | Assumption based on value of time and court length |
| 14 | Time spent waiting for next hearing | 90 days | - | Assumption |
| C5 | Cost of remitted cases | $10 | | [15 X (16 + 17) + 5 X 4] X 15 X 6 |
| 15 | Remittance rate | 0.04% | - | Calculated based on assumption from consultation |
| 16 | Cost per case to the Court, including preparation time | $1,866 | - | Estimated based on hearing of 2.5 hours, and the value of individual and court time (see 8) |
| 17 | Cost per case to the individual, including preparation time | $185 | - | |
| C1 | Longer time in court due to low quality interpreting | $900 | | 18 X 19 X 9 |
| 18 | Increased length of interpreting required | 50% | - | Assumption |
| 19 | Cost of interpreting per session | $308 | - | LSP data request |
| C6 | Costs associated with inefficient interpreters use | $170 | | 20 X 19 X 9 |
| 20 | Proportion of time wasted due to inefficient interpreting | 10% | - | Assumptions, drawing on sector survey question on how often time is wasted. |

Source: Deloitte Access Economics (2023).

Note that a similar methodology is used to estimate costs for FCFCOA and Federal Court, where an outcome resultant from sub-optimal is common to both courts. Note that the proportion of low quality interpreting is different for FCFCOA, as given in Table 3.5.

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[85] http://alejandrahayes.com/wp-content/uploads/2015/02/j08_v020_JJA_pt02_hayes_hale.pdf

## E.4.   Humanitarian Settlement Program

Table E.4: Baseline assumptions underpinning per unit economic and social cost of sub-optimal interpreting services, Humanitarian Settlement Program

| # | Description | Low-quality interpreting | Not accessing interpreting | Source |
|---|---|---|---|---|
| | Unit | Per HSP migrant with LEP receiving sub-optimal interpreting | | |
| D2 | Cost of delayed diagnosis resulting in potential mental health concerns | $180 | $190 | 1 X 2 X 3 X 4 X 5 |
| 1 | Adverse incidents due to interpretation issues (per clinic visit) | 3.4% | 3.4% | Rowse et al (2016)[86] |
| 2 | Adverse incidents resulting in delayed diagnosis | 38% | 38% | Rowse et al (2016)[87] |
| 3 | Average cost of anxiety and depression | $80,432 pa $220 per day | $80,432 pa $220 per day | Deloitte Access Economics (2022)[88] |
| 4 | Days of delayed diagnosis | 14 | 14 | Assumption |
| 5 | Health centre visits per annum | 5 | 5 | Refugee patient management plan under MBS |
| D1 | Cost of physical harm and poor health | $1,450 | $2,800 | 1 X 6 X 7 X 8 X 5 + 10 X 9 X 11 X 5 |
| 6 | Adverse incidents resulting in physical harm | 17% | 17% | Rowse et al (2016) |
| 7 | Cost of chronic pain (per day) | $118 per day | $118 per day | Deloitte Access Economics (2019)[89] |
| 8 | Days of physical harm | 30 days | 30 days | Assumption |
| 9 | Cost per GP visit | $134 | $134 | MBS |
| 10 | Return on investment from health savings due to GP visit | 8 | 8 | AMA (2022)[90] |
| 11 | Reduction in GP visits due to sub-optimal interpreting | 25% | 50% | Assumption |
| D3 | Value of not being able to access interpreters when needed | - | $610 | 13 X 14 |
| 13 | Value of interpreter session | - | $138 | LSP data request |
| 14 | Non-medical interpreter instances per person | - | 4.4 | Derived from BNLA [91] |

Source: Deloitte Access Economics (2023).

[86] Ibid.
[87] Ibid.
[88] Ibid.
[89] Deloitte Access Economics (2019), The cost of pain in Australia. Report prepared for Painaustralia.
[90] AMA (2022), The general practitioner workforce: why the neglect must end.
[91] Based on question on % of instances for interpreters not related to health, and combined with item 5.

# E.5. Services Australia

Table E.5: Baseline assumptions underpinning per unit economic and social cost of sub-optimal interpreting services, Services Australia

| # | Description | Low-quality interpreting | Not accessing interpreting | Source |
|---|---|---|---|---|
| | Unit | Per interpreting assignment with sub-optimal interpreting | | |
| F3 | Cost of miscommunication to the individual | $6 | $13 | 1 X 2 X 3 |
| 1 | Delay due to poor communication | 50% | 100% | Assumption |
| 2 | Average time per interpreter instance | 0.3 hours | 0.3 hours | LSP data request |
| 3 | Hourly cost to the individual | $37 | $37 | ABS Census data on average wages |
| F3 | Cost of miscommunication to the government | $12 | $24 | 1 X 2 X 4 |
| 4 | Staff and non-staff cost per hour | $71 | $71 | Services Australia annual report |
| E1 | Cost of delayed payments | $6 | $2 | 5 X 6 X 7 X 8 X 9 |
| 5 | Base rate of payment delays | 1.1% | 1.1% | Services Australia annual report |
| 6 | Increased likelihood of incorrect payment due to sub-optimal interpreting | 22% | 32% | Assumption based on the average increased risk of worse outcomes across aged care, public health services and legal setting |
| 7 | Value of payment per day | $50 | $50 | Payment rates for JobSeeker |
| 8 | Time of delay of payment | 14 days | 14 days | Assumption |
| 9 | Instances of interpreting for each instance of poor quality interpreting | 4 | - | Inverse of Table 3.5 |

Source: Deloitte Access Economics (2023).

## E.6. Sensitivity parameter changes

Table E.6: List of parameters changed under sensitivity analysis

| Description | Central value | Low sensitivity | High sensitivity |
|---|---|---|---|
| **Aged care** | | | |
| Persons accessing interpreters | 0% | 0% | 20% |
| Reduction in person-centred care for persons not accessing interpreters | 50% | 30% | 70% |
| Likelihood of poor interpreting from certified/specialist interpreters in person | 20% | 10% | 30% |
| Cost of poor quality interpreting | 50% | 30% | 70% |
| % of time wasted | 20% | 10% | 30% |
| **Public hospital and health services** | | | |
| % of persons accessing professional interpreters | 0% | 0% | 10% |
| Days of distress for patients | 60 | 50 | 70 |
| Likelihood of patients pursuing court cases | 5% | 0% | 10% |
| Likelihood of poor interpreting from certified/specialist interpreters in person | 20% | 10% | 30% |
| Number of emergency department visits | 25,143 | 23,886 | 26,401 |
| Number of non-admitted patients | 153,932 | 146,235 | 161,629 |
| Number of hospitalisations | 17,469 | 16,596 | 18,343 |
| **Legal settings** | | | |
| Wait for next hearing (days) | 28 | 21 | 35 |
| Cost per hour for the individual | $37 | $35 | $40 |
| Total adjournments | 320 | 300 | 340 |
| Proportion of cancellations | 15% | 5% | 25% |
| Increased cost of interpreting | 50% | 30% | 70% |
| % of time wasted due to poor quality interpreting | 10% | 5% | 14% |
| **Services Australia** | | | |
| Delay due to poor communication | 50% | 30% | 70% |
| Time of delayed payment (days) | 7 | 3.5 | 10.5 |
| **Humanitarian Settlement Program** | | | |
| Days of delayed diagnosis | 14 | 10 | 18 |
| Cost of poor quality interpreting | 50% | 30% | 70% |
| Reduction in ROI on health savings | 50% | 30% | 70% |

Source: Deloitte Access Economics (2023).

The impacts of the sensitivity analysis on the instance of sub-optimal interpreting per annum are given in the following tables.

Table E.7: Instance of sub-optimal interpreting per annum (2023) – low sensitivity

| Low scenario | Low quality | Unfilled demand | Lower bound | Latent | Upper bound |
|---|---|---|---|---|---|
| Aged Care (M) | 700 | 700 | 1,400 | 10,300 | 11,700 |
| Legal settings (H) | 3,600 | 700 | 4,300 | - | 4,300 |
| HSP (M) | 2,200 | 1,500 | 3,700 | 7,900 | 11,600 |
| Services Australia (L) | 59,600 | 27,100 | 86,700 | - | 86,700 |
| Public hospitals and health services (Qld) (H) | 11,300 | 1,50 | 12,800 | 3,800 | 16,600 |
| Public hospitals and health services (ROA) (M) | 104,400 | 13,900 | 118,300 | 35,100 | 153,400 |
| **Public Hospital and Health Services** | **115,700** | **15,400** | **131,100** | **38,900** | **170,000** |

Source: Deloitte Access Economics (2023).

Table E.8: Instance of sub-optimal interpreting per annum (2023) – high sensitivity

| High scenario | Low quality | Unfilled demand | Lower bound | Latent | Upper bound |
|---|---|---|---|---|---|
| Aged Care (M) | 2,000 | 700 | 2,700 | 10,300 | 13,000 |
| Legal settings (H) | 8,400 | 700 | 9,100 | - | 9,100 |
| HSP (M) | 6,500 | 1,500 | 8,000 | 7,900 | 15,900 |
| Services Australia (L) | 178,900 | 27,100 | 206,000 | - | 206,000 |
| Public hospitals and health services (Qld) (H) | 12,500 | 1,700 | 14,200 | 4,200 | 18,400 |
| Public hospitals and health services (ROA) (M) | 115,500 | 15,700 | 131,200 | 38,800 | 170,000 |
| **Public Hospital and Health Services** | **128,000** | **17,400** | **145,400** | **43,000** | **188,400** |

Source: Deloitte Access Economics (2023).

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